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THE

TRANSACTIONS

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

INSTITUTED 1832.

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CONTENTS.

ARTICLE PAGE

I.—The Retrospective Address; delivered at the Thirteenth Anniversary Meeting of the "Provincial Medical and Surgical Association," held at Sheffield, on Wednesday and Thursday, July 30th and 31st, 1845. By EDWARD CHARLTON, M.D., Lecturer on the Practice of Physic in the School of Medicine and Surgery, Newcastle-upon-Tyne 1

II.—The Retrospective Address in Surgery, for the year 1844–5; delivered at the Thirteenth Anniversary Meeting of the "Provincial Medical and Surgical Association," held at Sheffield, on Wednesday and Thursday, July 30th and 31st, 1845. By THOMAS P. TEALE, ESQ., F.L.S., Surgeon to the Leeds General Infirmary 63

III.—On Grinders' Asthma. By CHARLES FOX FAVELL, M.D., Physician to the Sheffield Infirmary 143

IV.—On the Inverted Displacement of the Urinary Bladder, with a Case. By JOHN GREEN CROSSE, Senior Surgeon to the Norfolk and Norwich Hospital, &c. 185

V.—Report of the Reading Dispensary, for the years 1841, 1842, 1843, 1844. By CHARLES COWAN, M.D., E. & P., Physician to the Royal Berkshire Hospital, and Reading Dispensary 191

VI.—A Statistical Report of the Surgical In-Patients of the Royal Berkshire Hospital, from its Establishment, May, 1839, to May, 1845. By GEORGE MAY, Fellow of the Royal College of Surgeons, London, Surgeon to the Royal Berkshire Hospital 213

Officers and Council of the "Provincial Medical and Surgical Association"..... 219
Officers of the District Branches 235
Honorary Members and Honorary Corresponding Members 239
List of Members 241

THE RETROSPECTIVE ADDRESS,

BY EDWARD CHARLTON, M.D.,

Lecturer on the Practice of Physic in the School of Medicine & Surgery, Newcastle-upon-Tyne,

DELIVERED AT

THE THIRTEENTH ANNIVERSARY MEETING

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION,

HELD AT SHEFFIELD,

ON WEDNESDAY AND THURSDAY, JULY 30TH & 31ST, 1845.

Two opposite courses present themselves for our selection upon the present occasion of addressing you. The one, easier for ourselves, by far, would have been to extract from various sources the most interesting cases and observations; the other, a much more arduous task, is to analyze the general opinions of the profession on each disease, to amalgamate them with our own experience, and, thus condensed, to present them to our hearers. It is needless to say that we have preferred the latter and the more difficult alternative; how far we may have succeeded it will be for you to decide.

We regret much that it has seemed necessary to the Council of the Association to re-unite the vast subject of physiology with that of practical medicine, as the obvious result has been, that much interesting matter relating to both departments has in this year's Address been omitted. On this account we cannot occupy your time by any preliminary observations, though the now agitated questions of Medical Reform, of Hygiène, and of

Medical Education, present tempting subjects whereon to discourse. One point, however, we may briefly notice,—the question of the preliminary education requisite for a medical man. As we advance in practice and in years, we must all be sensible of the immense advantages conferred on the practitioner, by his having previously secured a firm basis of classical and general learning. The man who, relying solely on his medical knowledge, ventures to mingle in the great struggle of the world, will sooner or later find himself so situated as that, with all his tact, he cannot avoid exposing his ignorance before those whose good opinion he is most anxious to conciliate. It is with pain that we have observed of late an increasing disposition to undervalue, as preparatory to our profession, a sound and complete classical education. We grant that the study of the Greek and Latin authors has been too exclusively pursued in this country; but we will ever maintain that a thorough acquaintance with the great writers of antiquity is essential in forming that taste, in fashioning that elegance and purity of expression, which is so important an ingredient in the success of every medical man. The study of the modern languages is now becoming more general in this country; and of these we need only say, that every additional tongue that is acquired, opens up new fields of instruction, and mingles a vast amount of intellectual gratification amid the more earnest duties of our profession. With these few observations we proceed to the more immediate subjects of

PHYSIOLOGY AND ANATOMY.

We shall not here, any more than at the beginning, apologise for the magnitude of the subject, for no one could expect that even the most condensed notice of all the investigations in physiology, or of all the microscopical researches in anatomy, could by any means be recorded in this Address. This is the more to be regretted in regard to physiology; for the great minuteness of detail necessary for the clear explanation of many recent doctrines and discoveries, has rendered several of the most valuable essays and papers almost incapable of analysis. We shall follow here that arrangement of the different portions of our subject which has been generally adopted in former years.

NERVOUS SYSTEM.

Longet and Matteucci* have continued their experiments upon the nervous system, and with some interesting results. Up to the present time, they observe, experimentalists, when acting by electricity on the nerves, have always found that the muscles to which they ramified, contracted both upon the formation and the interruption of the Galvanic circle, and that this took place whether the current was direct or inverse. But after some time these contractions are found only to ensue on the establishment of the direct, and the interruption of the inverse current. These experiments, however, have been made specially on the lumbar and sciatic nerves, which, as is well known, are of a mixed character, containing both sensitive and motor fibres. But they find the results to be totally different in regard to purely motor nerves, as the anterior fasciculi of the spinal marrow; for in experimenting on them, the contractions only ensue at the commencement of the inverse or centrifugal and the interruption of the direct currents. By acting on the posterior fasciculi before they are separated from the rest of the cord, convulsions are manifested only at the interruption of the Galvanic circle, in whichever direction the current of electricity be made to flow, and these movements are evidently occasioned by a reflex action upon the anterior roots of the nerves, as they cease entirely when the latter are divided. Finally, our authors here quoted have never observed the grey matter of the spinal cord to exercise any influence upon either motion or sensation, as they have repeatedly removed the whole of it without any visible effects upon the anterior or posterior columns.

Volkmann and Bidder's experiments prove that the sympathetic nervous system is essentially different from, and independent of, the cerebro-spinal system in the discharge of its functions. They removed the brain, or the spinal cord, or both, from several frogs, leaving in all cases the medulla oblongata to continue the respiratory movements. The general result was to show the strongest contrast between the effects of this destruction on the parts supplied by cerebro-spinal nerves and on those supplied by

* *Archives Générales de Médecine*, October, 1844, p. 251.

the sympathetic. In the former case all the muscles were rendered at once incapable of contracting upon either voluntary or reflex stimulus; in the latter instance, it was long before any such loss of power was manifested.*

Henle and Kölliker have observed a peculiar mode of termination of the nerve fibres in the little bodies, which are found chiefly upon the cutaneous nerves of the hands and feet, and to which has been given the name of Pacinian corpuscles. The nerve fibrils are seen to terminate in a knob, or else in a bifurcation within these bodies, and never in loops; nor does the terminal enlargement of the fibril resemble a ganglion corpuscle.†

We can only here refer to the excellent paper by Dr. Laycock, of York,‡ on the "Reflex Functions of the Brain," and to the essay of Dr. W. F. Barlow,§ of Oxford, upon "Reflex Action in Paralysed Limbs." M. Bourgery has also published an interesting paper on the "Splanchnic Nerves." The principal object of Dr. Laycock's paper is to confirm his formerly expressed opinion, that the brain, although the organ of consciousness, is equally subject to the laws of reflex action with the other nervous ganglia of the body; and to his arguments, in illustration of the theory, we beg to call especial attention, though to give even the briefest analysis of them here would be far beyond our limits.

It is impossible here also to detail the numerous observations recently made upon the functions of individual nerves; but we consider the conclusions of Mr. Paget in this respect to be of great value. Mr. Paget does not believe that the precise functions of the individual nerves have yet been determined, but that most probably:—

1. The glosso-pharyngeal is chiefly the nerve of the sense of taste, and in a less degree a nerve of common sensation.

2. That the glosso-pharyngeal is, according to the experiments of Müller and Hein, the motor nerve of the stylo-pharyngeus, and probably also of the palato-glossus. The branches which it gives to the digastricus, stylo-hyoideus, and constrictors of the pharynx,

* *Paget's Report; British and Foreign Medical Review*, April, 1845.

† *Paget's Report*, 1845.

‡ *British and Foreign Medical Review*, January, 1845, p. 298.

§ *London Medical Gazette*, 1845.

appear to be sensitive, or else derived from the facial and accessory nerves, with which it has previously united.

3. The pneumo-gastric is from its origin composed both of sensitive and of motor fibres; but it cannot be decided at present whether it alone supplies any particular muscles, or whether in all its muscular branches, and especially in those given off above the œsophageal, there are filaments from the accessory as well as from its own roots.

4. The accessory nerve contains in all its lower roots motor fibres alone; in its upper roots it is not improbable there are some sensitive fibres also. It is a motor nerve of the sterno-mastoid and trapezius muscles, and it is very probable that it gives, by its internal branch and other communications, motor fibres to the pneumo-gastric, from which they are subsequently distributed to some or all of the muscles of the larynx and pharynx, and in some animals to muscles of the palate.

RESPIRATORY SYSTEM.

M. Rochoux* calculates that the number of the cells in the lungs amounts to 600,000,000, and that about 18,000 are grouped around each bronchial termination. The lamellæ by which these cells are formed are composed of loose filaments, and in the angles resulting from the intersection of these lamellæ, ramify the capillary blood-vessels. The observations of Mr. Rainey† are nearly in accordance with those of M. Rochoux.

A memoir was read during the course of the last year to the French Academy, by M. Natalis Guillot, on the "Carbonaceous Matter produced in the Human Lungs, both in adult and in advanced age." This matter appears to be carbon in an exceedingly minute state of division; and wherever it exists to the thickness of more than a millimêtre, the veins, arteries, and air-tubes and cells are there obliterated, and such altered portions of the lungs are no longer liable to inflammation, though such may arise in the vicinity from excessive accumulation of the carbonaceous product. When the carbon is collected around tubercular deposits, the latter do not soften; the disease is then arrested in its progress, and the tubercles become calcareous and gritty.

* *Gazette Médicale de Paris*, January 4, 1845.

† *London Medical Gazette*, April 4, 1845.

M. Vierordt has ascertained that the quantity of carbonic acid expired is much less when the respiration is accelerated than when it is performed slowly.

A valuable paper upon the "Nature and Causes of Asphyxia" has been written by Mr. Erichsen,* of London. The author believes the cause of the stoppage of the circulation in asphyxia to be threefold, and that it depends:—

1. Upon the arrest of the respiratory movements.

2. Upon the weakening of the heart's action by the circulation through its substance of blood deprived of its stimulating qualities, and also diminished in quantity.

3. Upon the obstruction offered to the passage of venous blood through the lungs. This is caused by the refusal of the minute pulmonary veins to receive venous blood; and he considers venous blood to act in this case as a positive stimulant to the arterial system, though a sedative action has generally been attributed to it.

The observations of Mr. Erichsen, excellent in every way, deserve a longer notice; and his conclusions regarding the proper treatment of asphyxiated individuals will, we hope, produce some important alterations in the present management of cases of apparent death by asphyxia.

Although Mr. Hutchinson's essay on "Vital Statistics"† would seem to belong to another division of this Address, still the important results he has announced are so intimately connected with respiration as to demand a place here. Mr. Hutchinson has found that the capacity of the chest for air depends upon the height of the individual, and that for every additional inch of height, from five to six feet, eight additional cubic inches of air are given out by a forced expiration. This important fact has been proved by experiments, carefully conducted, upon 1,200 different individuals; and Mr. Hutchinson has since extended his observations to the chest in the diseased state, and especially in phthisis. In all cases he found his former conclusions pleasingly corroborated, the amount of capacity for air being constantly diminished, but always in a corresponding ratio with the height of the individual. Thus it was found that in a man of six feet,

* *Edinburgh Medical and Surgical Journal*, January, 1845, p. 1.

† *Journal of the Statistical Society*, London, August, 1844.

though proved by stethoscopic examination to be far advanced in phthisis, the capacity of the lungs was still greater than in a man several inches shorter, and whose lungs were but slightly affected.

The power of the muscles of respiration forms also an important part of Mr. Hutchinson's essay, and he believes that by a careful comparison of the capacity with the power alluded to, many valuable data relative to the lungs in the diseased state may be elicited. Mr. Hutchinson has constructed instruments for measuring the force of the respiration, as well as for ascertaining the capacity of the lungs. He divides the respiratory power into that of inspiration and expiration, the latter, of course, being the higher of the two, though he prefers the inspiratory power whereon to form his tables, on account of its greater regularity, and of its being less liable to be altered by habit or by various occupations. From the very ingenious tables which this writer has constructed, we find that in selecting men for any physical duty, five feet seven inches, or five feet eight inches, should be the standard for power, as in those above the latter height the force of respiration diminishes, though the capacity of the lungs continues to increase. Mr. Hutchinson thinks that we may suspect disease in the lungs whenever the expiratory power is not one-third stronger than the inspiratory.

CIRCULATION.

Blood.—The excellent Gulstonian lectures on the "Composition and General Physiology of the Blood," have deservedly added to the name which Dr. G. O. Rees had previously obtained as an accurate and conscientious observer. In these recently published lectures we meet with some novel views. After referring to the admirable researches of Dutrochet on endosmose and exosmose, Dr. Rees points out the application of these doctrines to the changes undergone by the corpuscles of the blood. He states that it may now be regarded as nearly certain that the corpuscles possess a vesicular structure, and also that the fluid within these is red in colour and the containing membrane white; and that the inclosed fluid must be of the same specific gravity as that in which the corpuscle floats. It is well known that the blood-corpuscles collapse and become flaccid when placed in contact with a solution of a higher specific

gravity than the liquor sanguinis, and become distended and much rounded under opposite circumstances. Dr. Rees believes that the fibrin of the blood is dissolved, and not suspended, in the liquor sanguinis, from the circumstance that if the latter were the case the corpuscles would be rapidly collapsed by solutions of 1.050 specific gravity, inasmuch as the serum suspending the fibrin could only have a specific gravity of 1.029 to 1.030, and the corpuscles would necessarily contain a fluid of no higher specific gravity than this.

Dr. Rees does not doubt that the red corpuscles contain nuclei, equal to about two-thirds of their size, and that the whole of the iron of the blood is derived from the serum of the chyle, and is contained in the red corpuscles. The chyle being of lower specific gravity than the liquor sanguinis, will naturally, according to the principles established by Dutrochet, part with its constituents to the corpuscles, and thus the latter are supplied with iron.

With regard to the fibrinous corpuscles, Dr. Rees proposes a most ingenious theory to explain the fact that these bodies, though larger than the blood-corpuscles, are exuded under certain circumstances, in preference to the latter. The blood-corpuscles he considers to resemble bladders filled with an incompressible fluid; the fibrinous corpuscles are solid, but sponge-like bodies, much more likely to pass through orifices of less than their own diameter.

Dr. Rees believes the blood-corpuscles to multiply by division, and, finally, he opposes the theories both of Mulder and of Liebig, in regard to the change of venous into arterial blood in the lungs. Mulder insists that the distinction of colour between arterial and venous blood, depends solely on a physical difference in the surface of the corpuscle, which forms a semi-opaque concave mirror in the former case, and a more transparent convex body in the latter; moreover, that during respiration the colouring matter of the blood undergoes no change, and indeed plays no part, either as a whole, or in regard to the iron, which exists therein merely as a simple element. Dr. Rees, on the contrary, suspects the hæmatosine to be the principal agent in the change effected; but the mode in which this is accomplished is still to us a mystery.*

We have not space for Mr. Gulliver's researches on "The Formation of the Buffy Coat of the Blood,†" nor yet for the briefest

* *London Medical Gazette*, 1845.

† *Medical Times*, February 22, 1845, p. 453.

analysis of Dr. Calvert Holland's interesting essay on the moving powers of that fluid.

Mr. Addison,* of Malvern, suspects that the fluid which distils from the capillary tufts of the Malpighian bodies of the kidney, is the same as that in which the blood-corpuscles have floated in the living body, and that this fluid is liable to constant variation, according to the qualities of the liquids swallowed or the nature of the chyle that is elaborated. The urine, then, of a healthy individual is a much nearer approach to the fluid in which the cells float, in their circulation through the living body, than either the serum remaining after the fibrillation of a mass of blood, or the liquor sanguinis which sometimes floats upon its surface. Mr. Addison concludes that the liquor sanguinis, the colourless and plastic layer at the surface of buffy blood, is analogous to the stationary, colourless, and plastic layer seen in the irritated vessels of the living frog, and very different indeed from the fluid forming the vehicle by which the cells circulate through the living body, which latter he considers to be a saline, limpid, and variable liquid, of an excrementitious rather than of a nutritive nature.

Mr. J. H. Walsh, of Worcester, has revived, under an improved form, the old doctrine which ascribed a sucking as well as a propelling power to the heart. He compares the pericardium to a firmly fixed tent or box, which does not yield with the contraction of the ventricles and auricles, and therefore that on their being emptied, a rush of blood must necessarily take place to supply the vacuum which would otherwise ensue between the contracted heart and the firmly fixed pericardium. But we fear that the pericardium will not be found to be the firm, unyielding case that Mr. Walsh supposes.†

A most elaborate and important essay on the composition of the blood has been published by Becquerel and Rodier. Their extensive experiments tend to confirm the opinion that the fibrin of the blood is increased proportionally in inflammation; that the proportion of the globules of the blood is diminished in anæmia, after prolonged abstinence or excessive hæmorrhage from any cause

* *Provincial Medical and Surgical Journal*, August, 1844, p. 266.

† *Provincial Medical and Surgical Journal*, February 5, 1845.

whatever; and, lastly, that the fibrin of the blood is little, if at all, diminished by venesection.

On the other hand, their researches tend to invalidate the following opinions:—

1. The proportion of $\frac{127}{1000}$ allotted to the globules in healthy blood, which our authors state is too low; nor is it the same in women as in men, being in the former $\frac{141}{1000}$, and in the latter only $\frac{127}{1000}$.

2. The received proportion of the fibrin $\frac{3}{1000}$, which they affirm to be too high, and give, as the proportion they have obtained, $\frac{2\frac{2}{10}}{1000}$.

3. The pretended increase of the globules in the plethoric condition of the system; for they have found that the composition of the blood is not altered in that state, but that in plethora there is a positive increase of the whole mass of the blood.*

Pulse.—M. Martin Solon has observed a venous pulse in the veins on the back of the hand, in two patients who had lost much blood by venesection. He explains this appearance by supposing that the blood had become abnormally fluid, and consequently passed more easily through the capillaries, retaining a portion of its arterial impulse. But the experiments of Poiseuille and Magendie have proved, that the more watery the blood becomes, the greater difficulty does it experience in making its way through the capillaries.†

Mr. T. W. King believes an unusually slow pulse to be caused by a very free safety-valve apparatus in the heart, (viz., a very easy means of reflux for the blood from the right ventricle,) along with retarded respiration, and that the latter is probably the result of lesion of the respiratory tracts or centres, either in the way of motor impulse or of excitor impressibility.‡

Heart's Action.—Some curious observations on the action of the heart, as seen in a case of congenital deficiency of the anterior parietes of the chest, are recorded by Dr. Mitchell.§ The child

* *Gazette Médicale de Paris*, Nos. 50 and 51, 1844.

† *Bulletin de l'Académie*, November, 1844.

‡ *Lancet*, March 22, 1845, p. 321.

§ *Dublin Journal of Medical Science*, November, 1844, p. 240.

survived its birth two hours, and the liver, the heart, the intestines, and the spleen, lay external to the ribs. Dr. Mitchell thinks, with Dr. Corrigan, that the impulse of the heart is not caused by the tilting up of the apex against the ribs, but that, like other muscles, the heart shortens and becomes thicker on the systole of the ventricle, by which the sides of these cavities are bulged out and perform the stroke. With Dr. M'Donnell this writer agrees, that the complete contractions of the heart in the fœtus in utero, are, perhaps, slower than those of the maternal heart. The numerous and rapid pulsations audible by the stethoscope, are owing to more sounds (auricular) being heard in the fœtal than in the adult heart, and from the two auricles not contracting simultaneously. The opinion of Dr. Williams and of Mr. Carlisle, that the ventricles never become entirely empty of blood, is fully confirmed by Dr. Mitchell's observations.

DIGESTION.

Bouchardât and Sandras have found that cane sugar, in order to be destroyed in the blood, must previously be changed into interverted sugar, or converted into lactic acid in the alimentary canal, the ultimate product of this destruction being water and carbonic acid. These experimentalists have also found that raw starch, though imperfectly assimilated by man, is well digested in the stomachs of the ruminantia.*

In the admirable essays of the Messrs. Goodsir, of Edinburgh, we meet with a probable solution of that most difficult question of lacteal absorption. It is effected, they suggest, by means of nucleated cells, those universal agents in the organic kingdom. As the chyme passes along the intestines, the epithelia are thrown off which cover the villi, so that the chyme comes fully in contact with their exposed surface. Scattered among the terminal loops of the lacteals in each villus, are numerous granular particles, which are probably the germs or nuclei of the absorbing vesicles, and these become fully developed during the process of chyme absorption. These vesicles (probably by endosmose) draw into their interior certain materials from the chyme surrounding the villi, and they subsequently burst and discharge their contents into the lacteals.†

* *Lancet*, March, 1845, p. 231.

† *Anatomical and Pathological Observations*, 1845, p. 4.

An opposite view of the process of lacteal absorption has been taken by a diligent and able observer, Mr. Samuel Fenwick, of North Shields. From the numerous and carefully conducted experiments which he has made, he concludes that the lacteals obtain their contents solely through the medium of the blood-vessels. His papers on this subject deserve attentive perusal.*

Liver and Bile.—Mr. Paget fully concurs with Müller in upholding Kiernan's views of the structure of the liver; but he states that Müller is in error when he describes the partitions of that organ to be formed of fibro-cellular structure.

A new test, equally efficient for discovering the presence of bile as well as that of sugar in animal fluids, has been proposed by Pettenkofer. This author, a pupil of the Giessen laboratory, founds his process on the fact, that when ox gall had been treated with sugar, and concentrated sulphuric acid was then added until the precipitate of choleic acid had begun to re-dissolve, the mixture became considerably heated, and the liquor assumed a deep violet tint, similar to that of hypermanganate of potass. This process may, of course, be inverted for the detection of sugar.

UTERUS AND ITS FUNCTIONS.

Puberty.—Mr. Roberton,† of Manchester, has obtained additional data respecting the age at which puberty commences in warm and in cold countries. It has been generally believed that menstruation occurs earlier in tropical and warm climates than in the regions nearer to the poles; but Mr. Roberton shows, from the answers obtained from the Moravian missionaries on the coast of Labrador, that the Esquimaux females there menstruate as early as the women in this country, the average age of the appearance of the menses in Labrador being fifteen years and a half. The catamenia cease among the Esquimaux females at a somewhat earlier period than with the women in this country; but may not this be a consequence of the hardships of their mode of life? The reports upon this subject which Mr. Roberton has received from Greece, also prove that puberty in that favoured clime does not commence earlier than on the inhospitable coast of Labrador.

* *Lancet*, January, 1845.

† *Edinburgh Medical and Surgical Journal*, January, 1845, p. 57.

Menstruation.—Much has been recently published regarding the theory of menstruation. The observations of Mr. Girdwood,* of Raciborski,† and above all of Bischoff‡, tend to prove that menstruation in the human female is analogous to the rut, or coming into heat, of animals, and that at each menstrual period a species of attempt at elaboration of an embryo, if we may use such an expression, takes place in the female ovaries. This explains the now pretty well established fact, that conception most frequently takes place immediately before or after the menstrual period. Mr. Girdwood's observations upon animals confirm also the opinion of Cuvier and others, that a secretion analogous to that of the menses occurs in the higher mammalia; nor is its sanguineous character solely confined to the human female. In woman and in the females of all animals in which the periodic discharge is apparent, this indicates always the maturation of an ovum, which is on the point of being eliminated from the ovaries, and the capability for impregnation is probably at its acme during the menstrual period or towards its close. Bischoff also states, that the bursting of the Graafian follicles, and the consequent discharge of ova, may take place perfectly independent of contact with the spermatozoa, or of sexual orgasm. The memoir of M. Raciborski,§ on "Corpora Lutea," though too long for analysis here, should be carefully studied by all who wish for information on this interesting subject; and we can recommend for perusal the elaborate memoir on the "Structure of the Uterus," by M. Jobert de Lamballe.||

Embryology.—Dr. Allen Thompson has continued his researches in embryology, and has lately published some very curious observations on the early condition and probable origin of double monsters. All true double malformations he believes to be accompanied with a double condition of the cerebro-spinal axis, and that consequently their duplex state is of original formation, or dates at least from the earliest stages of development.

Malformations by redundance of parts should be divided into two classes, the one including redundance of unimportant parts,

* *Lancet*, December 14, 1844.

† *Bulletin de l'Académie*, November, 1844.

‡ See a translation of his Memoir, by Mr. H. Smith; *London Medical Gazette.*

§ *Edinburgh Medical and Surgical Journal*, April, 1845, p. 514.

|| Dr. Ranking's *Half-Yearly Abstract of the Medical Sciences*, July, 1845, p. 278.

the other comprehending the double monsters, strictly so called. In the latter cases the ovum, according to Professor Thomson, is malformed from the very beginning. The writer also concludes, from a case observed at a very early period of development, that the rudimentary form, or first trace of an embryo in a double monster, is a simple groove, bounded on either side by dorsal plates, as in a single fœtus. The two primitive grooves thus lying side by side, become agglutinated together by the parts in immediate contact, and in these last there ensues a certain amount of arrest of development from want of room. In such cases a single visceral cavity may easily come to co-exist with a double cerebro-spinal axis.

MISCELLANEOUS SUBJECTS CONNECTED WITH PHYSIOLOGY.

Structure and Formation of Tissues.—Our limits do not permit us to do more than generally to refer to the admirable essays of the Messrs. Goodsir upon this and other important subjects. There is not a page of their work which is not replete with valuable information.

Bone.—M. Flourens maintains that bone is formed in the periosteum; that it increases in size by the addition of external layers; and that the medullary canal augments its dimensions by absorption of the internal layers of the bone.*

Dr. Watson comes to the following conclusions regarding the formation of bone by the periosteum:—

1. That the theories alleging that new bone is formed only by the living parts of the old bone, in cases of necrosis and fracture, are incorrect.

2. That the periosteum has evidently the power to produce new bone of itself, without the aid of the old bone.

3. That the formation of new bone by the periosteum consists, at first, in the deposition of osseous matter in the form of a fine microscopic network, and therefore that the Haversian canals are only a secondary, and not a primary formation of the osseous tissue.†

* *Archives Générales de Médecine*, October, 1844, p. 254.

† *Edinburgh Medical and Surgical Journal*, April, 1845, p. 307.

Dr. Stark has found oil in all the bones of animals; even the dense shaft of the cylindrical bones of the extremities contains a notable proportion, of from 4 to 25 per cent., independent of that known to exist in the marrow. He states that it is a fallacy to suppose that the bones contain a larger proportion of animal matter the higher we advance in the scale of organization. The following are the additional results of Dr. Stark's researches on this subject:—

1. The animalized base composes very nearly an exact third of the weight of the dry clean bone.

2. The proportion of earthy matter in the bones of the wild mammalia seems to be a fraction higher than in the domesticated animals. The bones of animals artificially fed, and deprived of their usual exercise, present a rather smaller amount of earthy salts.

3. Age does not seem to increase the amount of earthy matter in the bones.

4. The hardness of bones does not depend on the amount of earthy matter contained in them, nor do the more flexible bones appear to be deficient in earthy salts.

5. The transparency of bones does not depend upon a deficiency of earthy matter.*

Serous Membranes.—Dr. Robert Willis regards the serous membranes as internal substitutes for the external common integuments, and is of opinion that the fluid which perpetually bedews the surface of these membranes is analogous, as to its intent, with the perspiration on the skin. Dr. Willis believes that the exudation on serous membranes is carried off and distributed by the absorbents, and he thus seems to regard nutrition as a process of universal secretion.

The common theory, which ascribes the serious constitutional sympathies in cases of inflammation of serous membranes, to interference with the motions of the organs which they cover or line, is rejected by the writer, who believes it is rather that the nutrition and vitality of the organs concerned are compromised, and that the conditions essential to the access of the nutritive fluid, and to the removal of effete matters, are interfered with.†

* *Edinburgh Medical and Surgical Journal*, April, 1845, p. 308.

† *London Medical Gazette*, March, 1845, p. 767.

PATHOLOGY AND THERAPEUTICS.

We now come to the more practical division of our subject, the consideration of the diseases affecting the human body, and of the treatment best adapted to their cure. We shall follow here nearly the same order as we have already pursued in the physiological portion of this Address, and shall therefore first call attention to what has recently been written on the diseases of the brain and of the nervous system.

DISEASES OF THE NERVOUS SYSTEM.

Through the unceasing exertions of British and continental physicians we have been furnished with some additional data respecting this obscure class of diseases, but much of what has been advanced rests upon conjecture or analogy; nor can we hope for more positive observations and doctrines till our knowledge of the physiology of the nervous system is more extended than at present.

Softening of the Brain.—The pathology of cerebral softening and hæmorrhage has been carefully studied by that veteran observer, M. Rochoux, of Paris.* Softening of the brain, according to this author, occurs under three different forms, which must be carefully distinguished one from the other. These three conditions are:—

1. Softening preparatory to hæmorrhage. (Ramollissement hæmorrhagipare.)
2. Infiltration of blood.
3. Inflammatory softening.

With respect to the first of these three forms, M. Rochoux denies, in very pointed terms, the assertion that hæmorrhage ever occurs in the brain without previous softening.

Under the second condition, (infiltration of blood,) our author describes minutely the red points, termed capillary apoplexy by Cruveilhier, and so accurately described by Rokitansky and Koletscka, though the French physician seems totally ignorant of the researches

* *Archives Générales de Médecine*, November, 1844, p. 268; and December, 1844, p. 401.

of his German brethren. These appearances cannot, he thinks, occur in a previously healthy brain, as in that condition this organ is capable of resisting the most violent congestion, such as is known to occur, for instance, during the epileptic paroxysm. M. Rochoux believes these points to be formed by infiltration of blood through the coats, and not by actual rupture of the vessels, and also that they admit readily of being removed by appropriate treatment; and that after death from other causes, no cavity can in such cases be discovered, but only a sort of spongy areolar tissue, traversed by large and well-defined cerebral fibres.

To distinguish after death the third, or inflammatory form of softening of the brain from that preparatory to hæmorrhage, M. Rochoux observes, that in the latter case no effect is produced upon the brain by a stream of water directed upon its substance, whereas the whole is immediately broken up by this process when softening is the result of inflammation.

Finally, we have the important remark that it is not essential to the existence of inflammation in the cerebral substance that the characteristic redness should be present, as there is little or no cellular tissue in the brain; and on this last depends the amount of colouring in inflammation.

The observations of Dr. J. H. Bennett* are in many respects opposed to those of M. Rochoux. Dr. Bennett does not believe that softening necessarily precedes hæmorrhage in the brain. His observations on contraction of the limbs, as a symptom of inflammatory softening of the brain, are extremely interesting.

Paralysis.—Mr. Steele† has added another of those curious cases, first detailed and examined by Dr. Abercrombie, where the intellect remained apparently unimpaired after repeated slight apoplectic seizures, save that the individual had lost all power of forming words correctly.

Another instance of those perplexing cases for physiologists, where the lesion in the brain was found to be on the same side as that on which paralysis occurred, has been related by Signor Freschi.‡ It is probable that, in this case, the enormous extent

* *Edinburgh Medical and Surgical Journal*, July, 1844, p. 351.

† *Dublin Journal of Medical Science*, January, 1845, p. 355.

‡ *Lancet*, 1844, p. 304; from *Bulletino delle Scienze Medicale.*

of the lesion discovered on dissection may account for the anomaly above referred to.

In the *Practical Observations in Medicine,* published this year by that indefatigable observer Dr. Marshall Hall, we find some most valuable hints regarding the prevention and treatment of apoplexy and paralysis. Dr. Hall justly insists on the dangerous tendency of that once commonly received opinion, that all cases of this nature depend on a plethoric state of the system, and confirms the doctrine of the most enlightened observers of the present day, that apoplectic symptoms may arise equally from anæmia, from dyspepsia, from diseases of the urinary organs, or from the gouty diathesis. Dr. Hall recommends, in doubtful cases, that blood should be taken by a large orifice, from the patient when in the erect position; for should plethora have occasioned the dangerous symptoms, the loss of blood would be well borne to a great extent without syncope, and with decided benefit to the patient; while, on the other hand, if the vertigo and other signs have arisen from dyspepsia, gout, or an anæmic condition of the system, fainting would rapidly supervene, and would assist in leading to a correct diagnosis of the nature of the case.

The faculty of speech has been supposed by Dr. Cowan, of Reading, to reside in the anterior lobes of the brain, and this is corroborated by a case which occurred in the practice of Dr. Powell,* of Tonbridge, where the lesion after death was found to be located in these parts. Mr. Steele's case, above referred to, was perhaps also of this description.

Some curious observations, though more immediately connected with physiology than practical medicine, have been made by Dr. Bernard,† of Paris, on four cases of paralysis of the portio dura of the seventh pair, in all of which the power of tasting with the tongue was remarkably defective.

The hot-air bath has been found useful in a case of sudden and complete paralysis of the fore-arm, related by Dr. Kennion,‡ of Harrowgate. At the end of three weeks the patient recovered the complete use of the limb, without having taken any medicine internally. We think that something may be allowed to the *vis medicatrix naturæ* in this case.

* *Provincial Medical and Surgical Journal,* May 1845, p. 541.

† *Archives Générales de Médecine,* December, 1844, p. 480.

‡ *Provincial Medical and Surgical Journal,* June, 1844, p. 142.

Hydrocephalus Acutus.—The value of hydriodate of potass in hydrocephalus acutus has been strongly urged by Amelung, of Darmstadt,* in corroboration of the favourable report given of its powers by Röser, of Bartenstein. Dr. Amelung has found this preparation particularly valuable in that form of the disease which occurs after scarlatina, but he thinks the doses proposed by Röser (eight grains to a child of four years old) too large, or at any rate unnecessary; he believes an equal effect is produced by four grains in divided doses, daily, to a child of that age. But Röser gave three drachms of the hydriodate of potass to a child of three years and a half old, in twenty-four hours, and it recovered!† In a fatal case, where he believes that the iodine was too long delayed, the fluid in the ventricles of the brain gave a very distinct violet reaction with starch, after it had been previously treated with nitric acid, whence Röser concludes that the remedy is conveyed through the system in the form of hydriodate, and not of pure iodine.

The scalp issue of Dr. Wallis, of Bristol, has been successfully employed by Dr. Oke,‡ of Southampton, in this disease, but is deemed unnecessarily severe by Dr. Blackmore, in his excellent essays on nervous diseases.§ Dr. Blackmore prefers a deep incision in the scalp, and allowing the wound to bleed freely; though it is justly observed by Dr. Oke, that patients requiring these remedies are seldom in a condition to feel acutely from any operation. Too many distinct and separate maladies are still, we fear, classed under the name of hydrocephalus acutus.

Meningitis.—An acute form of this disease appears to have prevailed epidemically at Gibraltar during the early months of last year. Dr. Gillkrest states that it proved fatal in 45 cases out of 450. Several cases of meningitis are recorded in various periodicals: that detailed by Mr. Adams, in the *Dublin Journal of Medical Science,* is interesting, from the analogy observed between the symptoms and the appearances after death; and still more, from its furnishing another glaring instance of maltreatment by the so

* *Journal der Praktischen Heilkunde*, 1844.

† *Medizinische Annalen*, p. 481, 1843.

‡ *Provincial Medical and Surgical Journal*, September, 1844.

§ *London Medical Gazette*, March, 1845, p. 725.

called homœopathic physicians. We can refer with pleasure to an interesting essay on inflammatory diseases of the brain and of its membranes, by Mr. Vines, of Reading.*

Of Dr. Cowan's† excellent observations on encephaloid tumours of the brain, it is not possible to give a complete analysis. Dr. Cowan is disposed to think, from what he observed in the two instances he has recorded, that where the local and general symptoms justify the diagnosis of an organic affection of the brain, and when such symptoms are accompanied with remittent or intermittent pains of a neuralgic character, with gradual emaciation and a cachectic condition of the system, we may, with every probability, infer the existence of malignant disease. In one of the cases related by Dr. Cowan, a constant whizzing pulsatory noise was heard in the right ear, and on dissection after death an encephaloid mass was found lying on the temporal bone of that side.

Tetanus.—Opportunities, unfortunately but too frequent, have this year been afforded of testing the virtues of various boasted new remedies in this terrible disorder, and of proving that their efficacy, if any, was too slight and transient to entitle them to the fame of specifics. The Indian hemp has failed in the hands of Mr. Stafford,‡ Mr. Potter,§ and Dr. Babington;|| or, at the best, it afforded only temporary relief, though the utmost care was taken to obtain the drug in a state of purity. We do not, however, wish to infer that the extract of Indian hemp is totally valueless in this disorder. The cases recorded by Mr. Donovan and Professor Miller¶ are strongly in favour of its efficacy in allaying nervous irritation.

From the well-known sedative effects of intoxicating fluids on the nervous system, Mr. Stapleton,** of Trowbridge, was induced to employ alcohol in tetanus. Although he did not succeed in saving the patient's life, yet the influence of the alcohol in

* *Provincial Medical and Surgical Journal*, January 1845, p. 13.
† *Ibid*, April 16, 1845, p. 237.
‡ *London Medical Gazette*, April 29, 1845.
§ *Lancet*, January 11, 1845, p. 36.
|| *Ibid*, December 14, 1844, p. 352.
¶ *London and Edinburgh Journal of Medical Science*, January, 1845, p. 23.
** *Lancet*, March 22, 1845, p. 317.

diminishing the violent paroxysms was so obvious that the remedy, in so generally hopeless a disorder, is certainly worthy of trial. Mr. Stapleton attributed its failure to the long presence of the disease before the remedy was determined to be employed. A successful case, strongly corroborative of Mr. Stapleton's views, has recently been brought before the Medico-Chirurgical Society by Dr. Wilson.* In this well-marked instance opium had been tried in vain, and the patient was apparently saved from impending death by swallowing enormous quantities of brandy, not less than two gallons of that spirit, with a large allowance of wine, having been taken in the course of eight days.

For some excellent observations on the pathology and treatment of tetanus, I may refer to a paper by Dr. Inglis;† and this essay is rendered of increased value by the excellent rules that are there laid down for distinguishing the true from the spurious extract of Indian hemp.

Chorea.—Very little light has been thrown of late years upon this obscure nervous disease and its treatment. We have ourselves succeeded in curing some cases by arsenic, and others by zinc, where arsenic could not be borne; but in some instances we failed altogether, by any remedies, to relieve the symptoms, though of these a few afterwards recovered by change of air, and without medical treatment.

One case, induced by fright, in a girl of nine years old, is recorded in the *Lancet* to have been treated by the potassio-tartrate of antimony, after every other remedy had failed, and the patient eventually recovered. The case of intermittent chorea recorded by Nue, of Vordingborg, in the first number of the *Bibliothek for Læger*, for 1844,‡ is obviously connected with hysteria. The girl was nearly twelve years of age. The paroxysms occurred every hour, exactly as they were announced by the clock, (which by the way hung at the bed head,) and continued daily from six in the morning till seven in the evening. Our worthy Danish brother arrested the return of the paroxysm, by a few severe reprimands addressed to the patient

* April 22, 1845; *vide Medical Times*, May, 1845, p. 84.

† *Provincial Medical and Surgical Journal*, February and March, 1845.

‡ *Bibliothek for Læger*, 1844, p. 193.

Hydrophobia.—In the present state of our knowledge the successful treatment of this fearful disorder seems to be even more hopeless than that of tetanus. Dr. Hooper, of Buntingford*, records one instance, where he subdued evident symptoms of hydrophobia by calomel and opium; but in Mr. Jackson's† case, an ounce and a half of calomel was given in twenty-four hours, without arresting the disorder. Dr. Hooper thinks that salivation should be as rapidly as possible induced; but herein lies the main obstacle, for it is extremely difficult to obtain in such cases the specific action of mercury, though if produced, a favourable result may be expected. The extreme period during which the poison of hydrophobia may remain dormant in the system has not yet been determined. A well authenticated case of the outbreak of this malady, two years after the bite of a rabid dog, is recorded in a German work of high authority;‡ and another instance, embracing an exactly similar period of time, occurred in our own practice, in November, 1840.

Neuralgia.—Few will deny at the present day that a great proportion of neuralgic diseases are connected with derangement of the digestive organs; and a theory as to the direct cause of these pains has been founded partly on this acknowledged fact, and promulgated by several parties at the same time. The explanation proposed is, that those periodic congestions, so well known to occur in gouty and dyspeptic habits, are in neuralgia thrown upon the blood-vessels accompanying the nerves; and these latter being confined in unyielding bony canals, especially at their exit from the skull, are necessarily compressed by the overloaded vessels, and pain of a violent character is induced.

Dr. Allnatt has called our attention to the great variety of neuralgic complaints arising from dyspepsia, and he has added some curious instances of hepatalgia, in which perfect alternations of pains between the face and the hepatic region were observed.

With Mr. J. M'Veagh, Dr. Allnatt believes that all, or the greater part, at least, of true neuralgic affections, will yield to gentle purgatives, combined with colchicum, ipecacuanha, and

* *Lancet*, May, 1845, p. 158.

† *Provincial Medical and Surgical Journal*, November, 1844, p. 496.

‡ *Abhandl. der K. K. Gesellsch. der Aertze zu Wien*, vol. i.

hyoscyamus; and if the constitution have suffered from protracted unmitigated pain, alkaline vegetable tonics will effect a cure, which we might in vain expect from the more potent mineral preparations.

Inoculation with the salts of morphia has been tried with good success by Dr. Jacques, of Antwerp, and by Mr. Rynd, in this country.* With a lancet dipped in a pretty strong solution of sulphate of morphia, Dr. Jacques makes a number of punctures over the affected part, and repeats the operation for several successive days. M. Lafargue has obtained favourable results from the employment of veratrine in a similar manner.

Dr. D. Maclagan† and Professor Simpson have introduced to the notice of the profession a new preparation—the sulphate of bebeerine—an alkaloid, from the bebeeru or green-heart tree of British Guiana. They have tried this new remedy with success in several cases where quinine and iron were contra-indicated by the constitution or condition of the patient. In pregnant females with a tendency to miscarriage, and at the same time suffering from neuralgia, Professor Simpson found the alkaloid of great value, as quinine or iron could not be exhibited in these instances without imminent risk of causing abortion.

Epilepsy.—According to Dr. Corrigan,‡ of Dublin, digitalis has long been a popular remedy in Ireland, for the cure of epilepsy, though the doses in which it has been given are certainly too powerful. Not less than four ounces of the strongest infusion of the leaves are taken by the lower classes every third day, with fifteen grains of the root of the polypodium. Under the influence of such exaggerated doses, much irritation of the gastric mucous membrane is necessarily occasioned, with fearful sinking of the vital powers. Dr. Corrigan gives an ounce and a half of the infusion of digitalis, of the *Dublin Pharmacopœia,* every night at bed time, and increases the dose gradually up to three ounces, with decided effect on the disease. We should not ourselves recommend this plan of treatment, where the paroxysms arise, as they so frequently do, from irritation of the digestive organs.

* From *Provincial Medical and Surgical Journal*, July 3, 1844.

† *Edinburgh Medical and Surgical Journal*, April, 1845.

‡ *Dublin Hospital Gazette*, May, 1845.

DISEASES OF THE RESPIRATORY ORGANS.

Asthma.—The doubtful pathology of asthma has received little or no elucidation during the past year. Professor Henle,* of Zurich, in an excellent essay upon certain disorders of the bronchi, positively asserts the contractility of the walls of these air-passages, and believes that asthma may be caused either by cramp or by paralysis of their fibres.

The caroub of Judea, a parasitic production formed on the leaves of the Pistacia Terebinthus, has been tried by M. Martin Solon† in this disease. He does not consider it to possess any powers superior to those of the resinous and balsamic preparations in general use.

Mr. J. B. Harrison‡ has proposed the inhalation of the fumes of the nitrate of potash in this complaint. The remedy is of American origin, and at all events, from its great facility of application, is worthy of a trial.

Croup.—Dr. Ellis, of New York, recommends the croton oil ointment or liniment in croup and aphonia; and Valleix,§ of Paris, acknowledges, with Rokitansky, the identity of croup and diphtheritis, regarding them, with the Professor of Vienna, as differing only in situation.

Œdema Glottidis.—The name of laryngite œdemateuse, applied to this disorder by Cruveilhier and others, is justly, we think, objected to by Dr. Lasiauve,‖ of the Bicêtre, who denies that this malady arises always from inflammation. Dr. Lasiauve believes that œdema glottidis may and does frequently occur passively, in consequence of obstructed circulation in various parts of the body.

Pneumonia.—The question of the exact locality of this disease in the lungs remains at present undecided. Dr. Addison, Professor Rokitansky, and others, believe its seat to be within the air-cells;

* *Zeitschrift für rationelle Medizin*, 1844, p. 249.

† *Bulletin de l'Académie de Médecine*, September, 1844.

‡ *Lancet*, April 5, 1845, p. 383.

§ *British and Foreign Medical Review*, October, 1844, p. 300.

‖ *Annales de la Chirurgie Française*, &c., November, 1844.

while M. Prus,* with an equal weight of authorities, declares it to be essentially an inflammation of the intervesicular cellular tissue, and that it does not necessarily involve any lesion of the bronchial tubes or air-cells. A most elaborate article on the "Pathology of Pneumonia," has been published in a German periodical, by Dr. Himmelstiern, of Moscow.† In many respects this author's investigations coincide with those of Dr. Addison. He denies that grey hepatization is a *progressive* stage in pneumonia; he considers it merely as the process of resolution or softening, and that it is not a purulent infiltration of the pulmonary parenchyma, but is merely caused by the lymph, which has been effused on the interior surfaces of the air-cells, undergoing the process of softening preparatory to its being expectorated from the bronchi. This softening, however, may occasionally extend itself beyond the walls of the cells, and embrace the neighbouring parenchyma, which then becomes the seat of a true pulmonary abscess.

An excellent report upon forty-four cases of pneumonia, observed in the Royal Hospital of Christiania, has appeared in the *Norwegian Medical Journal.*‡ The proportion of deaths in these cases was one in eleven. Pneumonia of the right lung occurred in twenty individuals; of the left, in twelve only; while twelve other cases presented unequivocal signs of double pneumonia; still in these last the malady appeared to have commenced on the right side of the body. In one case no expectoration whatever occurred throughout the whole progress of this disease.

Much has been lately written upon the value in the diagnosis of pneumonia of the minute crepitating sound, so much insisted upon by Laennec. It seems to be a prevailing opinion that a very similar sound may be produced by small particles of lymph upon the surface of the pleura; though as these asperities (if we may so term them) on that serous membrane seldom occur without effusion of fluid into the cavity of the pleura, it is possible, as is suggested by Dr. Macdonell, of Belfast, that the crepitation alluded to is merely the result of air re-entering the previously compressed vesicles of the lungs. But if, on the other hand, it be true that,

* *Revue Médicale*, April, 1845.

† *Haeser's Archiv.*, 1843, p. 576.

‡ *Norsk Magazin for Lægevidenskaben*, 1843.

according to Dr. Durrant,* of Ipswich, perfect pneumonic crepitation is never heard but on inspiration, then the analogy between the two sounds will no longer hold good; for it is obvious that if the sound be produced by the rubbing of the pleura, it must be audible also on expiration.

In the treatment of pneumonia we have advanced but little. Dr. Gouzée,† of Antwerp, recommended small doses of morphia in the delirious state, which often continues after the subsidence of the inflammatory symptoms; but his doses are extremely small, being only $\frac{1}{24}$th of a grain of morphia every six hours.

Dr. Upshur, of New York,‡ has given the iodide of potassium in pneumonia with great success, especially in the so-called third stage of that disease. The advantages of this remedy have been chiefly apparent in those cases eminently characterised by depression of the vital powers of the system.

From the experiments of Gluge and Thiernesse,§ it appears that animals fed upon daily increasing doses of oil die, after some time, with all the symptoms of violent pneumonia.

Gangrene of the Lung.—One of those rare instances of recovery, after every symptom of gangrene of the lung, has been recorded by Dr. Tinniswood, of Carlisle.|| Several portions of pulmonary parenchyma were observed in the horribly fœtid matter expectorated. In two other cases of gangrene of the lungs, related by Dr. Watson, of Liverpool, the bronchial tubes were found to have resisted the process of destruction longer than the cellular tissue or the parenchyma of the lungs, as they lay loose along with the blood-vessels in the gangrenous cavity.

Pleurisy.—In the year 1830, Dr. Wendelstadt, of Hersfeld,¶ communicated to *Hufeland's Journal* the history of his own sufferings from pleurisy, accompanied by empyema, for which the operation of paracentesis of the thorax had been performed upon him in 1817. From this last period, and up to the year 1843, the

* *Provincial Medical and Surgical Journal*, January, 1845, p. 65.

† *Archives de la Médecine Belge*, March, 1845, p. 123.

‡ *Lancet*, February, 1845.

§ *Gazette Médicale de Paris.*

|| *London and Edinburgh Journal of Medical Science*, July, 1844, p. 548.

¶ *Kleinert's Repertorium*, May, 1844, p. 73.

fistulous opening in the pleura continued to discharge large quantities of pus, and there was evidently also a communication between the bronchi and the sac of the pleura, as the patient could by a sudden effort extinguish a candle placed within six inches of the fistulous opening. Dr. Wendelstadt, though much debilitated, was able to continue his professional duties till March, 1843, after which time he was confined to the house, and died in August of that year, the thirty-third from the commencement of the disease, and the twenty-seventh from the date of the operation. The left lung and pleura were quite healthy, but of the right lung only a trace remained, consisting of a mass six inches long and one inch and a half broad and thick, and scarcely permeable to air, but through whose substance, nevertheless, there existed a communication between the bronchi and the pleural cavity. This last, as might be expected, was very thickly lined with false membrane.

Instances where the fluid of empyema makes its way into, and is expectorated from, the bronchi, are by no means very rare: but in one case, recorded by Dr. Macdonell,* it was remarked that the breath, on the patient coughing or making a violent expiration, was intensely fœtid, while it was not so on ordinary respiration. Dr. Macdonell accounts for this phenomenon, by supposing that the more distant bronchial ramifications were compressed by the effusion, and that the air contained in them became putrid, and was only evacuated from the chest upon the more violent exertion of coughing. In this case, too, a loud single *bruit de soufflet* was heard in the descending aorta, which in all probability was occasioned by the pressure of the distended pleura upon that vessel, with which it is there immediately in contact. As, however, this sound was not audible in eight other cases of empyema of the left pleura, we are justified in concluding, with Dr. Macdonell, that it can only occur when the pleuritic effusion is tightly bound down by false membranes.

M. Trousseau† has lately entended the operation of paracentesis to the cure of acute as well as of chronic empyema. The three patients on whom the experiment was tried all slowly recovered, though they are stated to have been almost moribund when the operation was performed.

* *Dublin Journal of Medical Science*, January, 1845, p. 434.

† *Archives Générales de Médecine*, September, 1844, p. 103.

Hooping-Cough.—The paroxysms of hooping-cough are believed by Mr. Streeter* to be occasioned by the irritating nature of the saline secretion poured out in that disease. This theory, however, is not new; it was originally promulgated by M. Blaud, in 1831, who stated also that the above named secretion contained a very large proportion of hydro-chlorate of soda.

Phthisis.—The past year has presented the usual number, or even more, of essays, observations, and separate cases, relating to this disease. We must, however, acknowledge that no strikingly novel views of the pathology of tubercle, nor any advances in the treatment of its various stages, have been laid before the public. Our only hope is, that the true nature of the disease, and its appropriate treatment, may finally be discovered by steady perseverance in those researches by which so many have of late distinguished themselves, viz., the closest microscopical and chemical investigations, guided by a sound and cautious pathology. Some of these we shall now proceed to notice. One of the first questions that presents itself regards the nature of the grey granulations observed in tubercular lungs. From the time of Laennec and Bayle they have formed a subject of controversy. This year we would say that the balance inclines more towards the opinion of Andral and others, that they are not of a tubercular nature, but should be considered as the result of chronic pneumonia. If such really be the case, as is asserted positively by Lombard, of Geneva,† these may soften and form small cavities, and if ever closely aggregated may form large excavations without passing through the stages of tuberculization. Rampold, of Esslingen, is decidedly of this opinion.‡

The aspect of tuberculous matter, at the very first appearance in the system, has been described by M. Rochoux§ to be that of a filamentous tissue, singularly interlaced, and this gradually assuming a pale orange colour, becomes miliary tubercle.

The chemical constituents of tubercle have been as variously stated as their origin and growth. M. Boudet|| reiterates his

* *London Medical Gazette*, November, 1844, p. 195.

† From *Northern Journal of Medicine*, February, 1845, p. 254.

‡ *Kleinert's Repertorium*, March, 1844, p. 65.

§ *Académie des Sciences*, December 30, 1844.

|| *Archives Générales de Médecine*, October, 1844, p. 247.

assertion, that the calcareous concretions found in phthisical individuals, especially in the lungs, are composed chiefly of soluble salts, namely, 70 per cent. of the chloride of sodium, and of phosphate and sulphate of soda, with but a small amount of the phosphate and carbonate of lime. M. Boudet's opinions are objected to by Dr. S. Wright, of Birmingham,* who has invariably found these calcareous bodies to consist of the phosphate of lime alone, or in combination with the carbonate. Boudet also states that he has found casein in pulmonary tubercles, and that he also constantly observed them to contain a considerable proportion of cholesterine,—not less than one-twentieth part of the dry tuberculous matter.

The contradictory opinions I have here enumerated show that much must be done ere this question can be finally settled.

Besides the essays upon tubercular disease by Dr. Evans, of Dublin,† and by Dr. S. Wright, of Birmingham, we have this year two very valuable papers on this subject from the pens of Dr. Addison, of London,‡ and Dr. J. H. Bennett, of Edinburgh.§ Dr. Addison chiefly directs our attention to the important part played by inflammation in all cases of so-called tubercular disease. He denies that tubercular infiltration is entitled to that name, but states it to be always the result, not of tubercular deposit, but of a a slow and insidious form of pneumonia. In proof of this assertion, he refers to many cases where, though the whole lung was infiltrated with the so-called tuberculous matter, no single tubercle could anywhere be detected. Many, we think, will be disposed to believe with Dr. Addison, that the majority, if not all, of the so-called galloping consumptions, where the patient is often carried off in a few weeks, are in reality instances of a peculiarly insidious form of sub-acute pneumonia. Dr. Addison describes phthisis under three separate heads:—

1. Pneumonic phthisis, to which we have already referred.
2. Tuberculo-pneumonic phthisis, where the patients die of pneumonia, though tubercles are present in the lungs.
3. Tubercular phthisis, properly so called.

* *Medical Times*, January and February, 1845.

† *Lectures on Pulmonary Phthisis;* Dublin, 1845.

‡ *Guy's Hospital Reports*, April, 1845.

§ *Edinburgh Medical and Surgical Journal*, April, 1845, p. 406.

Dr. Addison's essay should be carefully studied.

Although Dr. Bennett professes merely to treat of the curability of phthisis in his essay, still we find that he has carefully selected the most approved doctrines regarding the origin and nature of tubercles, and has appended to these his own valuable observations. Dr. Bennett considers tubercles to be in a great measure identical with, or analogous to, lymph. Both are the products of inflammation, granular and perfect cells being formed in the one case, and granular but imperfect cells in tubercle. Gulliver, Vogel, and others, have asserted tubercle to be composed of imperfectly nucleated cells; but this is denied by Dr. Bennett, Lebert, and a host of talented observers. Dr. Bennett does not admit the absolute origin of tubercle from inflammation, without qualifying this opinion by the statement, that the essential difference between tubercle and the products of normal inflammation, consists in a difference, chemical and vital, of the blood-plasma of which they are composed, and which in tubercle is probably some form of protein less capable of passing into organization as fibrin. The principal object of Dr. Bennett's paper is, as we have said before, to prove the greater frequency of the cure of phthisis than is generally supposed. For some years this has been a favourite doctrine of several eminent pathologists in France; and we ourselves entirely concur with Dr. Bennett, as to the much greater frequency of calcareous concretions, puckerings of the lung, and the other signs which he enumerates, than has been generally admitted by English writers. The question is, however, how far these *post-mortem* appearances are really indications of a cure. Out of 308 cases examined by Boudet, Rogée, and himself, Dr. Bennett states that more than one half presented the above conditions in the lungs. The great difficulty in the cure of phthisis will, we think, ever continue to be the constitutional tendency to further deposit. In reference to this part of our subject we may notice the much disputed question of the influence of a malarious climate in arresting the course of phthisis. M. de Crozant* has confirmed, in this respect, the observation of Boudet; but it must be acknowledged that a plan of treatment founded on this doctrine, will only substitute one evil influence for another, which, though less fatal, will equally embitter the patient's existence. Opium

* *Journal de Médecine*, May, 1844.

has been extolled by Forget, of Strasbourg,* as almost a specific in the cure of consumption. Naphtha, as a remedial agent, has never obtained the confidence of the profession; and Mr. Rose, of Norwich, bears further testimony against its value in this disease.

Our highest living authority in phthisis, M. Louis, has been lately engaged in a series of interesting trials, of a plan proposed by a French physician for the cure of phthisis.† M. Türck had stated that consumption might be effectually cured by confining phthisical patients to a room, kept uniformly at a high temperature, and of which the atmosphere was strongly impregnated with ammoniacal vapours. M. Louis tried this plan on seven individuals, five males and two females, at the Hôpital Beaujon. The results were very unsatisfactory; no real amelioration was produced; two, indeed, seem to have died from capillary bronchitis induced by the treatment, which was so irksome and annoying to the patients that only two resolutely submitted to it for a long period of time. Of other remedies, cod-liver oil appears now to be going out of favour, in spite of the high encomiums passed upon this remedy by Pereyra, of Bordeaux; and of the operations of opening the chest from without, in tubercular excavations, it is scarcely necessary here to speak, as it has only once been attempted in this country, and that under such auspices as would not induce a recurrence to such a questionable mode of cure.

DISEASES OF THE CIRCULATING SYSTEM.

Functional Disorder.—Professor Christison,‡ of Edinburgh, has called the attention of medical men to the frequency of cases of functional heart complaints, simulating hypertrophy of that organ. The disorder he alludes to is characterised by violent pulsations of the heart, which are most felt near the point of the sternum and over the left costal cartilages. The palpitations usually attain their maximum when the patient retires to rest at night; but the affection may be distinguished from organic disease by being unaccompanied by dyspnœa, and by the absence of all abnormal signs on auscultation and percussion. Exercise, if not too violent, tends

* *Bulletin Générale de Thérapeutique*, December, 1844.

† *Archives Générales de Médecine*, December, 1844.

‡ *London and Edinburgh Journal of Medical Science*, February, 1845, p. 81.

rather to mitigate than to increase the malady. Professor Christison believes these symptoms to be connected with a small heart and a highly excitable temperament, and that dyspepsia cannot be regarded as its sole cause, though he acknowledges that the functions of nutrition and assimilation are often impaired.

Cyanosis.—In the *Gazette Médicale* for February, 1845, we find detailed at great length, a singular case of malformation of the heart in a child nearly seven years of age, who for five years had been affected with cyanosis. On dissection there were found the rudiments, certainly, of the four cavities of the heart, but only one auricle and one ventricle were efficient for carrying on the circulution.

Another case of cyanosis is related by M. F. Aran,* and is valuable from all the stethoscopic signs having been accurately noted during life. After death, there was found narrowing of the pulmonary artery, and a communication between the two ventricles.

An interesting variety of heart-disease has been described by Dr. Macdonnell.† It was first noticed by Dr. Graves, in his clinical lectures, who had seen it in three instances; and since then two more cases have been seen by Dr. Macdonnell. Violent functional palpitations of the heart occur in the complaint, but the region of the heart presents nothing abnormal on auscultation or percussion. The two striking peculiarities in this affection are an enlargement, to a great degree, of the thyroid gland, giving to it the thrill under the hand of aneurismal varix, and a peculiar prominency of the eye-balls, causing a wild and ferocious aspect, though without any pain, dimness of vision, or other inconvenience. Rest and palliative treatment have afforded relief, but have not effected a cure.

Abscess of the Heart.—Of this rare disease an instance occurred in the practice of Dr. Chambers, of Colchester.‡ The symptoms during life that may perhaps be referred to the disease in question were epileptic convulsions and great distension of the jugular veins. An abscess, containing two ounces of pus, was found deeply

* *Lancet*, 1844, p. 501.

† *Dublin Journal of Medical Science*, May, 1845, p. 200.

‡ *Lancet*, July, 1844, p. 557.

embedded in the substance of the heart, and extending from auricle to auricle aronnd the apex of that organ.

In a case of partial inflammation of the heart's substance, described by M. Gintrac, of Bordeaux, matter formed in the parietes of the left ventricle, and burst into the pericardium.*

Two very remarkable instances of death from rupture of the heart's fibres, and of the blood-vessels that ramify on its surface, have recently occurred in Edinburgh. One of these cases is probably well known, from the high professional attainments of the distinguished individual whose life was thus suddenly terminated. I allude of course to Dr. Abercrombie.† A rupture of the fibres of the heart, about half an inch in length, was found on the posterior surface of the left ventricle, but the fissure did not extend into the cavity of the organ. The coronary arteries had undergone atheromatous degeneration, and one of the coronary veins presented an open orifice of considerable size. Dr. Abercrombie's death was probably instantaneous; but in the other case, that of a lady aged 75, and related by Dr. Maclagan,‡ the patient survived for about an hour after the symptoms first showed themselves, and the appearances, on dissection, were very similar to those recorded above.

Dr. Duncan's case of fatal hæmorrhage, occasioned by false teeth impacted in the œsophagus,§ and perforating the aorta, is curious and rare, but does not present any circumstances of peculiar interest.

Death from perforation of the aorta does not always immediately ensue, but much of course depends upon the resistance offered to the flow of blood by the adjacent parts, which in this instance were soft and yielding. Dr. Peacock, of Edinburgh,|| and Mr. Tripe, of London,¶ have each recorded instances where an aneurism of the ascending aorta burst into the right ventricle. The disturbance of the balance of the circulation was, as might be expected, very great. In one case the patient seems to have lived only

* *London and Edinburgh Journal of Medical Science*, July, 1844., p. 621.

† *Ibid.*, December, 1844.

‡ *Ibid.*, June, 1845.

§ *Northern Journal of Medicine*, April, 1844.

|| *London and Edinburgh Journal of Medical Science*, January, 1845, p. 16.

¶ *Lancet*, 1845, vol. i., p. 221.

eighteen hours after the accident; in the other, he probably survived for three or four days.

The formation of polypiform concretions in the heart, towards the period of dissolution, has been discussed by M. Aran,* but he does not elucidate the subject by informing us that, in the case he describes, the blood had probably, during the few days preceding death, become so modified by pre-existing disease, that it acquired a great tendency to coagulate in the cavities of the heart.

Little advance has been made during the past year in the diagnosis or treatment of heart-disease in general, but we may refer to the admirable lectures of Dr. Bellingham,† and of Dr. Williams,‡ for excellent rules in these respects, unaccompanied by any predisposition to peculiar theories.

Digitalis has been strongly recommended in heart-disease by Dr. Munk,§ but Dr. Henderson has pointed out that in one species of heart complaint it would be dangerous, namely, in a patent state of the aortic orifice, which has been so admirably described by Dr. Corrigan. In such a case, if the system be placed under the influence of digitalis, the heart will become less and less able to expel the blood regurgitated into its cavity, and its hypertrophied and dilated condition will be necessarily increased. Dr. Munk ascribes the conflicting opinions regarding the efficacy of digitalis to its injudicious and indiscriminate administration. As a sedative he has found the tincture most efficacious, while the diuretic action of the drug is best promoted by the infusion.

As prophylactic of heart-disease during and after rheumatic affections, Dr. Furnivall‖ strongly recommends treatment by alkaline preparations; and he asserts that he has hardly ever seen that organ become diseased when the rheumatism had been subdued by alkalies alone.

Pericarditis.—Dr. S. Scott Alison¶ has called our attention to the frequent occurrence of pericarditis after and during scarlatina,

* *Archives Générales de Médecine*, August, 1844, p. 461.

† *Dublin Medical Press*, February, March, and April, 1845.

‡ *Medical Times*, April, May, and June, 1844, *passim*.

§ *Guy's Hospital Reports*, October, 1844.

‖ On "Diseases of the Heart;" London, 1845.

¶ *London Medical Gazette*, February 21, 1845, p. 664.

a complication which has scarcely been noticed by former writers. In two instances the affection of the pericardium seems to have occurred early in the disease, though, from the history of the cases this is somewhat doubtful; and Dr. Snow expressly states his conviction that pericarditis after scarlatina supervenes only as a consequence of the renal disorders well known to prevail in that disease. The question of the relative importance of these two secondary disorders in scarlatina will, we hope, receive further elucidation.

Arteries.—Canstatt and Œsterlen* both maintain that we cannot depend upon mere depth of colour as a proof of inflammation of the inner coats of the blood-vessels. Œsterlen, indeed, expressly asserts that the condition of the blood where this deep colouring is observed in the coats of the arteries, is the very reverse of inflammatory.

In his excellent review of the present state of our knowledge of heart-disease, Valleix† agrees with Andral and Bizot, that the atheromatous, cartilaginous, and bony masses, or plates, occurring on the surface of the heart and arteries, are not of inflammatory origin.

DISEASES OF THE CHYLOPOIETIC SYSTEM.

Malignant Sore-Throat.—An accidental circumstance, where tartar emetic had been given by mistake to a child labouring under this disease, impressed Dr. J. Arnott with a high opinion of the efficacy of emetics in such cases.‡ This mode of treatment has been tried in croup also, with success; the great point seems to be to keep up severe vomiting for a long period together. In strong children and adults this may fearlessly be practised, but in weak individuals it should surely be cautiously employed.

In cynanche tonsillaris Dr. B. Morris has used guaiacum with very satisfactory results.§

Dyspepsia.—Dr. Chapman, of Philadelphia, has strongly depicted the evil effects of American habits on the functions of the stomach.

* *Kleinert's Repertorium*, May, 1844, p. 27.

† *Archives Générales de Médecine*, September, 1844, p. 50.

‡ *London Medical Gazette*, January 10, 1845, p, 475.

§ *London and Edinburgh Journal of Medical Science*, November, 1844, p. 949.

The rapid bolting of unmasticated food, so general at American tables, the excitement of commercial speculations, and the immoderate use of tobacco and ardent spirits, all combine to render dyspepsia the most common of transatlantic ailments. Most serious effects on the nervous system are shown by Dr. Chapman to result from the immoderate use of tobacco alone, by persons otherwise perfectly temperate. Dr. Chapman's treatment of dyspeptic cases does not differ from that pursued in England, and confirms the now generally received opinion, that the management of dyspepsia can be subjected to no positive rules, and that most remedies are only palliative unless a total change is effected in the diet and habits of the patient.

Pain in the region of the stomach arises from so many different causes, that it requires the utmost discrimination in the treatment. Neuralgic pain may similate irritation of the mucous coat of that organ, and *vice versâ;* and we have, besides, the long array of organic disease, cancer, scirrhus, and ulceration, wherein neuralgic pain of a more or less violent character does constantly occur. In true gastralgia, Dr. Strange* recommends the well-known remedy, the tris-nitrate of bismuth, with half a grain or a grain of the extract of belladonna, and rubefacients and derivatives externally; while, at the same time, he judiciously insists on the necessity of altering and improving the too-generally debilitated constitution of the patient. In gastralgia, accompanied as it so often is by water-brash, Dr. Strange has found the above treatment peculiarly efficacious. Dr. Chapman speaks highly in praise of milk as a remedy in gastralgia, but he acknowledges that it sometimes accumulates in the stomach in large masses of a cheesy nature, and these may occasion terrible gastric oppression, and dangerous obstruction of the bowels.

Abdominal pulsation, so feelingly described some years ago by Dr. Hohnbaum, has been investigated by Dr. Nottingham,† and he confirms the general opinion that it arises from many different causes, as from tumours pressing upon the aorta, from aneurisms of that vessel, or, what is by far the most frequent, from nervous irritability. We ourselves have often thought abdominal pulsation to be connected with the arthritic diathesis.

* *Northern Journal of Medicine*, July and December, 1844.

† *Medical Times*, February 22, 1845.

Perforation of the Stomach.—Several instances of this affection have been recorded within the last twelve months. In those described by Mr. Taylor,* of Guildford, there was evidently ulceration of a slow insidious nature, which gradually perforated the coats of the organ. In that related by Dr. Lindberg, of Horsens, in Jutland,† and which occurred in a young female, a round opening, without any swelling, softened appearance, or redness, was observed in the anterior wall of the stomach. The patient had been indisposed for twenty-four hours with symptoms of peritonitis, when she suddenly sprang out of bed and died.

Rokitansky, who has so admirably described the various forms of ulceration of the stomach, always stated that individuals affected with this disease were frequently subject to violent cramp-like attacks in the stomach. I have sought in vain for any symptoms of this kind in the cases above mentioned.

A singular difficulty in respect to diagnosis occurred to Dr. Barlow in a case of perforating ulcer of the stomach. A large cyst or abscess had formed in the cavity of the peritoneum, and was connected, by means of the ulcer which had given rise to it, with the interior of the stomach. The contractions of the diaphragm in this case, causing the passage of air from the stomach to the adventitious cavity, and *vice versâ*, gave rise to many of the symptoms of pneumothorax with pulmonary fistula, such as amphoric resonance, metallic tinkling, etc., so that during life the pleural sac was considered to be the part chiefly involved.

Hæmatemesis.—Vomiting of blood from foreign bodies accidentally introduced into the stomach, is by no means of rare occurrence, but it is seldom that death ensues from such accidents. Mr. Dicken, of Ashby-de-la-Zouch, gives the history of a boy, aged ten years, who accidentally swallowed a halfpenny, when at play, and every effort to dislodge the coin from the body proved fruitless. For nearly a month no bad consequences ensued, but he was then suddenly attacked with hæmatemesis, which proved fatal on the third day. On dissection, a circular ulceration was found in the stomach, of exactly the size of the missing coin, and situated at some distance from the pyloric orifice. The coin had

* *Lancet*, December, 1844, p. 369.

† *Bibliothek for Læger*, 1843, No. 4, p. 235.

traversed the whole length of the intestinal canal, and was found in the rectum; and the child, the day previous to his death, had distinctly felt the sensation of its being dislodged from the stomach, and of its passing through the intestines. This case confirms the opinion that very serious lesions may silently progress in the stomach without occasioning pain or any other symptoms.*

Enteritis.—Perforations of the duodenum from inflammation are of rare occurrence. In an instance recorded by Dr. Engel, of Nakskov, the patient died, with all the symptoms of duodenitis, in thirty-three hours; and, on dissection, the duodenum was of the darkest crimson hue, almost black, and much bloody fluid had flowed into the cavity of the peritoneum from several perforations in the duodenum and upper part of the jejunum.†

Intus-susception.—A remarkable case of this kind, involving a difficult question of medical jurisprudence, is described by Dr. Tinniswood, of Carslisle. A boy had been kicked violently on the abdomen by one of his companions; he went to bed in his usual health, but during the night, symptoms of internal strangulation came on, and death rapidly ensued. On dissection, the obstruction was found to have been caused by a band of lymph, firm and old, passing from one portion of the intestines to another, and through this aperture twenty-six inches of the ileum had insinuated itself, and had been strangulated and become gangrenous, as in hernia. Dr. Tinniswood justly regards the internal hernia, (Innere Darmeinschnürung of Rokitansky, second form,) as having existed for some time; but he thought that the blows on the abdomen had probably caused inflammation and gangrene of the incarcerated portion.

Peritonitis.—The old doctrine, that lumbrici and other worms may perforate the intestine and cause fatal peritonitis, is adhered to by an excellent pathologist, Dr. Svitzer, of Copenhagen; and we confess that in the case which he records there is much that corroborates this opinion. Lumbrici are very apt to pass into the peritoneum through any ulceration in the intestines, and then their

* *London Medical Gazette*, April 11, 1845, p. 886.

† *Bibliothek for Læger.*, 1844, No. 1, p, 200.

contact with the peritoneum would probably occasion dangerous inflammation. An abstract of this case is given in the *London and Edinburgh Journal of Medical Science* for June, 1845.

The most important contribution to the subject of peritonitis has been Dr. Spittal's essay on friction-sounds audible in that malady.* Laennec, we believe, has the honour of first noticing this symptom, as a means of diagnosis; but as the observations of that great man, alluded to by M. Piorry, did not occur in his printed works, the subject has remained for a long time unnoticed by the profession, or at least did not receive that degree of attention to which it is entitled. Dr. Spittal believes the mechanism by which the friction vibrations are produced to be of three kinds.

1. The respiratory movements, chiefly of the diaphragm, but also the action of the abdominal muscles; the vibrations being synchronous with these movements, though sometimes only detected during inspiration.

2. Pressure by the hand on the abdominal parietes.

3. The peristaltic motion of the intestinal canal.

By any of these means friction-sounds may be produced, if exudation of lymph has taken place on the peritoneal surface; but Dr. Spittall thinks that such sounds may be heard even before that event, when the peritoneal surface is dry at the commencement of the disease.

Perityphlitis.—Our knowledge in respect to this disorder has been increased by two valuable papers, by Dr. William Sellers† and Dr. Paterson.‡ Dr. Sellers contrasts these cases with the iliac abscesses occurring after delivery: he considers the seat of the malady to be in the cellular tissue, between the fascia of the iliacus internus and the coats of the cæcum. This fascia forms a barrier to the evacuation of the purulent matter externally, and therefore the cæcum, two thirds of which are uncovered by peritoneum, usually gives way in preference to any other part. Dr. Paterson, however, seems to hold an opposite opinion, at least with regard to the case related by him, where he considers the abscess originally to have formed in the vermiform process of the cæcum, and

* *London and Edinburgh Journal of Medical Science*, May, 1845, p. 345.

† *Northern Journal of Medicine*, July, 1844.

‡ *Dublin Journal of Medical Science*, January, 1845, p. 412.

subsequently to have occasioned the collection of a large quantity of pus in the surrounding cellular tissue. The abscess burst suddenly one day, on the patient straining to evacuate the bladder, and caused fatal peritonitis. A small concretion, consisting of hair and mucus intimately mixed, was found in the peritoneal cavity; and Dr. Paterson suggests that this had been originally impacted in the appendix vermiformis, from whence the inflammatory symptoms originated.

Constipation.—Small doses of strychnia, with a view of restoring the peristaltic action of the bowels, have been successfully administered by Mr. Small, of Boston,* in a case of most obstinate constipation, which had resisted all other remedies for the space of ten days.

Dr. Barlow† has recently noted a symptom which, if it prove to be correct, will be of great importance in forming an exact opinion as to the seat of obstruction of the bowel. In cases where the obstruction is situated high up in the intestinal canal, nearer to the stomach, little or no urine, says Dr. Barlow, will probably be secreted, as a very small quantity of fluid can pass into the intestines, so that the supply by absorption to the kidneys will necessarily be reduced. The contrary, however, will be the case if the obstruction occur in the colon.

Liver.—The subject of hepatic disease has been investigated at great length by Professor Bang, of Copenhagen, in a most elaborate report, which we can only regret is too diffuse for analysis here.‡

Dr. Allnatt§ has treated of the diagnosis and cure of neuralgia hepatica, and has especially called our attention to the decidedly paroxysmal character of the disease, the patient enjoying during the intervals perfect immunity from pain, which is never the case in hepatitis. Moreover, in hepatic neuralgia, pressure gives relief during the utmost height of the paroxysm, and the dyspeptic symptoms so prominent in liver-disease are wanting, or but slightly marked, in neuralgia of that organ. Dr. Allnatt has seen a patient

* *Medical Times*, February 2, 1845, p. 442.

† *London Medical Gazette*, May, 1845.

‡ *Bibliothek for Læger*, 1844, No. 1.

§ *London Medical Gazette*, March, 1845, p. 796.

attacked with violent hepatic neuralgia on the cessation of tic douloureux in the face; and he observed in this instance a frequent metastasis of the malady to its former seat, and then back again to the liver. Mercury and carbonate of iron aggravated the complaint, which yielded however to gentle purgatives combined with colchicum, ipecacuanha, and hyoscyamus.

Jaundice.—Dr. Corrigan* has described a form of jaundice which has hitherto not been generally recognised, or at least distinguished from the other conditions in which this malady occurs. The disease usually sets in suddenly: in twenty-four or thirty hours the patient may be jaundiced all over; but the pulse continues regular, the tongue clean, the appetite undiminished, the white stools and the urine loaded with bile, being the only indications of deranged health. If, however, the slightest symptoms of head-affection now appear, as coma or delirium, no effort of art can save the patient, nor can we after death discover the slightest indication of disease in any organ of the body. Of all remedies hitherto employed, the most efficacious have been found to be emetics. Dr. Corrigan gives half a drachm of ipecacuanha every second night till the jaundice disappears.

DISEASES OF THE URINARY SYSTEM.

Diabetes.—From the present chemical tendency of medical investigation, it is naturally to be expected that this hitherto imperfectly understood disease will have received a considerable share of attention. No new theories, however, regarding the possible cause of the malady have been promulgated, excepting those of Dr. Watts;† nor can we characterise his doctrines as perfectly novel, since it has long been maintained that the primary cause of diabetes resides in the digestive, and not in the uropoietic organs. Dr. Watts, however, has added several important facts to our knowledge of diabetes, which disease he believes to be marked at its commencement by the presence of lithates in the urine, and by a sub-inflammatory condition of the gastric mucous membrane, which

* *Medical Times*, January 25, 1845.

† *Lancet*, April 19 and 27, 1845.

renders the digestive organs unable to azotize the saccharine and the oleaginous secondary principles, and produces a great tendency to the accumulation of fat. This obesity is subsequently followed by diabetes mellitus, properly so called, where the digestive process affords a low kind of sugar, but is incapable of accomplishing its further assimilation.

The advantages of a residence in a hot climate in the cure of diabetes have been strongly urged by Dr. Keith Imray, who informs us that this disorder is almost unknown within the tropics, and that of several patients who, at his recommendation, had resided in the West Indies, after suffering in Scotland from well-marked diabetic symptoms, not one had fallen a victim to this disease.*

Mr. Moore, of Queen's Hospital, Birmingham,† has proposed to employ the liquor potassæ as a test for sugar in the urine. On boiling liquor potassæ with diabetic urine, no change of colour is at first perceived, the glucic acid which is then formed being colourless; but by the continued action of heat this acid is changed into the melassic, which gives a highly characteristic rich claret colour to the fluid. Mr. Moore does not coincide with Dr. Golding Bird in that gentleman's high estimate of the value of Trommer's test for diabetic urine, as he finds that the slightest variation in the quantity of the chemical re-agents employed therein, alters considerably the colour produced; and Mr. W. T. Gairdner adds strong testimony to the same effect.‡ Mr. Gairdner believes that the precipitate thrown down by Trommer's test is not uncombined protoxide of copper, but that both in diabetic and in healthy urine, a similar precipitate may result from a combination of the oxides of copper with various animal substances occurring in the urine. Mr. Gairdner prefers, to all others, the fermentation test with yeast, aided by the microscope, to detect the confervoid vegetations.

Albuminuria.—The opinions of Dr. Corrigan § on this disease are remarkable, inasmuch as he believes it to be analogous to the

* *Edinburgh Medical and Surgical Journal*, January, 1845, p. 65.

† *Lancet*, September 14, 1844, p. 751.

‡ *London and Edinburgh Journal of Medical Science*, July, 1844, p. 565.

§ *Medical Times*, April 5, 1845.

disorder he has so well described as cirrhosis of the liver. The first stage of the disease is one of hypertrophy, caused by the deposit of lymph in the intervening cellular tissue, and not in the tubular substance of the kidneys. The second stage is one of contraction, as in cirrhosis. The former condition Dr. Corrigan considers curable; the latter, as perfectly beyond the reach of art, and characterised by the low specific gravity of the urine, which, in the earlier stage of hypertrophy, is scarcely altered in that respect.

M. Fourcault and Mr. G. Ross* believe the presence of albumen in the urine to depend mainly upon diminished activity of the cutaneous perspiration. Albuminuria was certainly produced in M. Fourcault's experiments of totally suppressing in animals all evaporation by the skin; and Mr. Ross adds, that should ascites, or effusion into any serous cavity take place, the quantity of albumen in the urine will disappear or will be greatly diminished. These observations of the authors above named have opened a wide field for further enquiry.

A curious instance of the effect of cantharides on the urinary bladder has been recorded by M. Morel Lavallée.† Four patients, to whose loins or chest large blisters had been applied, suffered severely from all the symptoms of strangury, and passed subsequently a quantity of false membranes from the urethra.

Mr. Parker, of Liverpool,‡ describes a case of calculus of the bladder, where the nucleus of each concretion was formed by a minute hair, exactly similar in structure to the hairs of the scalp. The point of the hair was imbedded in the calcareous matter of the calculus, while the bulb was distinctly visible at the other extremity; whence Mr. Parker concludes that these hairs could not have been introduced from without, but that they had grown on the inner surface of the bladder, and subsequently became detached from their position by the weight of the accumulating calculus.

Of Dr. Golding Bird's admirable work on urinary diseases, it is unnecessary here to speak, as the greater part of the observations in

* *Lancet*, August 3, 1844.

† *Archives Générales de Médecine*, August, 1844, p. 517.

‡ *Edinburgh Medical and Surgical Journal*, July, 1844, p. 152.

this book has previously appeared in one of our medical journals; we may, however, particularly recommend the chapter on the oxalic acid diathesis, as highly deserving the attention of the profession.

DISEASES OF THE REPRODUCTIVE SYSTEM.

Dysmenorrhea.—This disorder is considered by Dr. Rigby* to be almost always intimately connected with appreciable derangement of the functions of digestion and nutrition, and that it is often a symptom of the gouty or rheumatic diathesis. In such cases the urine is generally loaded with lithates, and the functions of the skin are also impaired. Dr. Rigby recommends in such cases the employment of colchicum, guaiacum, or iodine, and praises the extract of taraxacum, as having great power in restoring the dormant action of the liver.

Chlorosis.—Of the researches of Becquerel and Rodier on the condition of the blood in this disease we have already spoken. They seem to prove that chlorosis should be distinctly separated from anæmia, with which it has hitherto been so often classed; for while in the latter condition the mass of the blood is impaired, and probably diminished in quantity, in chlorosis we find that the contrary state may and does frequently exist; that there is an absolute increase of the mass of the blood—an absolute plethoric condition of the system. These conclusions are corroborated by the testimony of M. A. Duchassaing,† who states that the majority, or at least a considerable proportion, of the congestions of various organs occurring in chlorotic females, are caused by an aqueous plethora, which is relieved by venesection and purgatives. Dr. Ashwell has judiciously recommended the iodide of iron in the chlorosis of strumous females.

Ovarian Disease.—We do not here propose to enter upon the subject of ovarian disease and the recent controversy regarding the extirpation of ovarian cysts, as this lies more properly within the province of surgery. In reference, however, to inflammation

* *Medico-Chirurgical Review*, July, 1844.

† *Journal de Médecine de M. Beau*, December, 1844.

of the ovaries, M. Chereau corroborates the opinion, that inflammation of the left ovary is more frequent than that of the right; and he accounts for this fact by the greater proximity of the left ovary to the rectum, in which fæcal matter is so apt to accumulate in females who neglect the state of their bowels. In forty cases occurring in his own practice, or recorded in various journals, M. Chereau found that ovarian disease had occurred twenty-five times on the left side, eleven times on the right, and four times on both sides.*

DISEASES OF UNCERTAIN SEAT.

Gout.—It is suggested by Mr. Alexander Ure,† that the uric acid which exists and accumulates in the urine of individuals of a gouty habit, may become urate of soda through the medium of the serum of the blood, at the ordinary temperature of the human body, and that the phenomena of gout may thus arise from a depraved condition of the blood, caused by its admixture with the above salt. As a cholagogue cathartic in gout and jaundice, Mr. Ure recommends the sulphate of manganese, which exists naturally in the anti-arthritic waters of Carlsbad and Marienbad, in Germany. During the paroxysms he advises that the affected limb should be bathed with acetic ether, or, better still, with pure naphtha, by which the pain and swelling are usually much relieved. Mr. Ure has also tried the silicate of potash (the ancient liquor of flints) in tophaceous concretions of the joints, and apparently with favourable results.

Dr. De Bourge, of Rollot, recommends the extract of the flowers of colchicum in gout, and that it should be given in combination with aconite, which he believes to have a peculiar efficacy in averting the deleterious action of colchicum on the digestive organs.‡

Rheumatism.—Dr. Wilson § has strongly reprobated the error of considering rheumatic fever as a local disease, insisting with many, we might say most, of the pathologists of the present day, that it is as much a constitutional disorder as any of the exanthemata.

* *Journal des Connaissances Médicales*, November, 1844.

† *London Medical Gazette*, November, 1844, p. 190.

‡ *Gazette Médicale de Paris*, 1845, No. 8.

§ *Lancet*, November and December, 1844.

According to this doctrine, metastasis does not really take place in rheumatism; for as all the blood circulating through the body is in an unhealthy condition, deposits or congestions may anywhere occur, but they are found most frequently in the heart. Thus the joint-fever of rheumatism, to use Dr. Wilson's own words, becomes a heart-fever. In some cases of most extensive heart complication, the pulse at the wrist remained unaltered. In one instance the heart was drowned in serum, its cavities were plugged with fibrin, hydrothorax co-existed with apoplexy of the lungs, yet no irregularity existed in the radial pulse. Could not the stethoscope and percussion have revealed some of these lesions during life? Dr. Wilson never once refers to these means of diagnosis. The cerebral complications of rheumatic fever are believed by Dr. Wilson to be entirely sympathetic of disease of the heart or lungs, and that therefore antiphlogistic treatment directed to the head is of no avail. The plan of treatment so much employed in rheumatic fever—that by strong doses of calomel and opium—he deprecates as injudicious,—"as a rude empirical practice, which seldom succeeds, and which, failing of success, is often most injurious to the patient." Colchicum, digitalis, and venesection, he places nearly in the same unfavourable light. Dr. Wilson's practice in rheumatism therefore becomes one of extreme simplicity. Of all remedies, the most efficacious, in his opinion, is the hot-air bath, to promote perspiration, while internally he administers salines, with an excess of a carbonated alkali, and trusts to rest and perfect quietude of body and mind for completing the cure.

Dr. Henry Bennet has added to his former observations of the efficacy of large doses of nitrate of potass in acute rheumatism. The sulphate of quinine, so highly extolled by M. Legroux, he does not consider entitled to much attention; and this is corroborated by Mr. Barnes, who remarks also on the facility with which doses of nitrate of potass are supported by rheumatic patients, to an amount which would prove seriously hurtful to a healthy individual.

Dr. Neligan has administered hemlock, with decided advantage, in rheumatic affections, both sub-acute and chronic, particularly when attended with severe pain, neuralgia, and senile gangrene.

Dr. Williams's lectures on rheumatism are also deserving of an attentive perusal.

Skin Diseases.—The "trâitement Arabique," or Arabian formula for skin diseases of a chronic kind, whether they be of syphilitic origin or not, has been detailed and briefly commented on by Mr. Dangerfield.* The formula is much too long for insertion, and, like the decoctum Zittmanni, appears to be unnecessarily complicated.

We may here also notice the epidemic of erysipelatous fever which occurred in Vermont and New Hampshire in 1842–43. It is described by Drs. Hall and Dexter as having been of an exceedingly malignant character; and the disorganization of the cellular tissue in some cases proceeded so far as to separate the muscles from the bones. Three medical men are reported to have fallen victims to their zeal in examining bodies after death. The treatment, as in most new and severe epidemics, appears to have been various and uncertain.

In addition to the notices of the spedalskhed, or Elephantiasis Græcorum, by Dr. Danielsen, of Bergen, we have this year a more detailed and extended history of this remarkable malady by Dr. Boeck, of Kongsberg, in Norway.† This gentleman was sent by the Norwegian Government to investigate the disorder in its present chief habitat in Europe,—the western coast of Norway. The entire number of individuals affected with spedalskhed in Norway amounted to 659; and it is curious, that in Bergenstift the disease is considered by the people to be non-contagious, while in Nordland, in the South of France, and in Greece, it is regarded as highly communicable from one person to another. Now, in Bergenstift, where the affected continue their relations to society and to their families, the disease prevails in the proportion of 1 in 511; while in the more inhospitable climate of Nordland, where the miserable leper, as of old, is thrust forth from the fellowship of mankind, it only occurs in the proportion of 1 to 947 of the population; and in Greece, where a similar fear of contagion exists, only as 1 in 2505.

For a detailed account of this singular malady we must refer to the excellent periodical from which this is quoted, though there also, many facts are omitted from want of room, which give great interest to the original.

* *Lancet*, July 13, 1844.

† *British and Foreign Medical Review*, October, 1844.

Dr. Skae* and Mr. Wills† concur in believing that the sibbens of Scotland is identical with venereal condyloma. Thus the general identity of all the diseases which have been assimilated to the old leprosy receives an additional confirmation. The most distinguished physicians of the countries where these maladies prevail, agree in ascribing to the radesyge and spedalskhed of Norway, and to the liktraa of Iceland, a probable though distant syphilitic origin.

FEVER.

Much has been lately effected in this country towards the obtaining more complete statistical accounts of the prevalence of fever in our manufacturing towns, as well as in our country districts. But it must be acknowledged that, as yet, our continental, and especially our German brethren, by the excellent arrangement of the whole country being parcelled out into districts, each under the superintendence of responsible medical officers, possess much more perfect machinery for the collecting of reports upon the sanitary condition of the people. How much more complete, for instance, would be the history of the curious epidemic fever which prevailed in several parts of Scotland in 1843, could it have been possible to obtain from every town and district where the fever raged, a detailed history of the rise, progress, and termination of the malady.

Some additional observations upon this epidemic have been published by Dr. Smith,‡ who does not agree with Dr. Cormack in assimilating this disorder to the yellow fever of the West Indies. Vomiting in the Scottish fever was a symptom seldom observed, and the still more characteristic black vomit (*vomito prieto*) was never seen.

The most valuable contribution to the pathology and treatment of fever during the past year is undoubtedly that of Dr. Davidson, of Glasgow,§ than whom few, if any, have enjoyed better opportunities of studying this scourge of great cities in its most

* *London and Edinburgh Journal of Medical Science*, July, 1844.

† *Ibid.*, April, 1844.

‡ *Edinburgh Medical and Surgical Journal*, July, 1844.

§ *London and Edinburgh Journal of Medical Science*, December, 1844, p. 997.

malignant forms. Dr. Davidson regards the poison of typhus as resident in the blood itself, and does not believe that we possess any means of expelling it at once from the system. We must wait, therefore, for the spontaneous subsiding of the morbid action according to its own determinate laws, and content ourselves with watching and relieving urgent symptoms, and, above all, keeping up the vital strength of the system till the poison is eliminated. We can hence naturally conclude that Dr. Davidson is no friend to the lancet in typhus fever; and he justly argues that it tends still further to weaken the debilitated inhabitants of large cities, who are the most frequent subjects of the disease. Real inflammation, he states, rarely occurs in typhus, though congestion of various organs is of frequent occurrence. Emetics are insufficient to check the course of typhus, though they may be useful in the catarrhal forms of that malady. Much relief is afforded by sponging the surface of the body with tepid water; and diaphoretics—chiefly small doses of ipecacuanha with tartar emetic—have also a beneficial effect. Mercury is of no value as a specific in typhus, but it may be useful as a means of regulating disordered secretions. The sheet-anchor of Dr. Davidson's practice is wine, which he administers freely in all cases of weak pulse and exhausted condition of the system. In the very earliest stage of fever, while there is great excitement, wine should be withheld, but at a more advanced period, even though pneumonia should be present, wine is necessary to support the failing energies of the patient. To the use of opium in typhus fever Dr. Davidson is unfavourable, save in small doses to check the exhaustion of diarrhœa. On the other hand, we find Mr. Burgess, of London, recommending large doses of calomel and the cold affusion in the worst cases of typhus.

The history of several epidemics of typhoid fever, occurring in the Austrian capital, has been recorded by various members of the Vienna Medical Association.* The details given confirm the general opinion, that bad sewerage and deficient ventilation are some of the chief causes of any form of typhus; and we observe, too, that the most favourite treatment was that by powdered alum, in doses of from two to five grains every hour. This was given under all circumstances, partly, it seems, as an antiseptic, and partly to arrest

* *Transactions of the Vienna Medical Association*, reviewed in the *British and Foreign Medical Review*, January, 1845.

the diarrhœa, so frequent, if not constant, in the abdominal complication of typhus in Germany.

In the typhoid fever of children, Rogée* has found that the temperature of the body may form a means of diagnosis between this disorder and simple enteritis. In the latter disease the temperature is lower than in abdominal typhus, in the proportion of $37\frac{96}{100}$ to $40\frac{14}{100}$.

As a specimen of a singular train of investigation on the part of our German brethren, we may here refer to the opinions of Dr. Beer, of Vienna,† of the relation of vaccination to typhoid fever. Dr. Beer asserts that ileo-typhus (*i. e.* that with the abdominal complication) was unknown during the prevalence of small-pox, and was not, indeed, described till the year 1810 or 1811. (We thought that Rœderer and Wagler wrote before this period!) All the sufferers from typhoid fever, according to Dr. Beer, have been vaccinated individuals; those who have been inoculated after the old method invariably escape, for small-pox and typhoid fever mutually destroy one another. The origin of this doctrine is probably the theory once maintained by Schönlein, that abdominal typhus is an intestinal exanthema.

Intermittent Fever.—The general effects of malaria at a distance have been illustrated by Dr. Robertson,‡ of Northampton, and Dr. Parkin, of Woolwich; the latter gentleman states, that the effects of malaria near Woolwich are often first observed on the summit of Shooter's Hill, from whence they gradually descend, becoming more malignant in their character as they approach the sources of infection about the Plumstead marshes.

Dr. Robert Willis§ has advanced a perfectly new theory regarding the origin of intermittents, which, if correct, will essentially alter our theories and treatment of the disease. Dr. Willis denies altogether the existence of marsh miasm or malaria, which, in truth, the best chemists have never been able to detect, and maintains that the supposed influence is nothing more nor less than that of moist warm air—air excessively moist, considered in connexion with its own temperature and with that of the human

* *Archives Générales de Médecine*, October, 1844, p. 154.

† *Kleinert's Repertorium*, March, 1844, p. 116.

‡ *Provincial Medical and Surgical Journal*, August, 1844, p. 342.

§ *London Medical Gazette*, July 12, 1844, p. 482.

body. The arguments by which Dr. Willis supports his theory are certainly ingenious, and the whole paper worthy of consideration.

M. Henri Gouraud questions the accuracy of M. Piorry's doctrine regarding the action of the sulphate of quinine on the enlarged spleen of intermittent fever. Professor Piorry stated two years ago, to the French Académie des Sciences, that if a gramme (sixteen grains and-a-half) of quinine dissolved in water, with a little additional sulphuric acid, were administered to a patient with enlarged spleen, the volume of that organ would be very sensibly diminished in the short space of forty seconds. The fact itself, as elicited by percussion, M. Gouraud does not deny; but he much doubts the inference drawn from it, and believes it to admit of a much more simple and rational explanation. He has found that an exactly similar result may be produced by a few drops of sulphuric acid in an equal quantity of water, or by lemonade, by wine and water, or even by simple distilled water. The apparent diminution of size of the spleen cannot, therefore, arise from a specific action of the quinine on that organ; and M. Gouraud thinks that a developement of gas takes place in the stomach when fluids are swallowed, by which the larger curvature is distended and the spleen forced downwards and backwards, beyond the reach of percussion. He has found the same phenomena to ensue in experiments on the healthy spleen as on that which was diseased.*

Scarlatina.—In addition to what has been already said regarding the connexion of scarlatina with pericarditis, Dr. Corrigan has called our attention to a symptom in this malady of very dangerous tendency, and which he believes has not before been observed. This is a diffuse inflammation of the cellular tissue of the jaw and around the ear, which, however, must not be confounded with simple parotitis. It very frequently terminates in death, by sloughing of the cellular tissue and adjacent parts; and treatment by incisions generally hastened the unfavourable result.†

Rogée has found that the temperature of the body always is increased in scarlatina, but that the pulse and the quickness of respiration do not always correspond with the elevation of the temperature.‡

* *Journal des Connaissances Médico-Chirurgicales*, December, 1844.

† *Medical Times*, May 10, 1845.

‡ *Archives Générales de Médecine*, October, 1844, p. 140.

Dr. Golding Bird* has laid down some excellent rules for distinguishing between the dropsy of debility, (the asthenic dropsy of Dr. Willshire,) and that which arises also after scarlatina from really diseased kidneys. He believes that the more frequent occurrence of dropsy after mild than after severe attacks of scarlatina, may be explained by the supposition that where the eruption is slight, it is insufficient to eliminate the morbid matter from the system; the residue, therefore, of the poison must be carried off by some other channel, and most naturally by the kidneys, whose capillaries then become dilated, and congestion ensues. The consequence of this is a double lesion of their functions; on the one hand, exudation of the albuminous element of the blood, and, on the other, retention of the nitrogenized products.

Measles.—Rogée found the temperature of the body less elevated in measles and variola than in scarlatina.

Dr. Cathcart Lees has described a severe form of laryngeal inflammation after measles; and in one or two instances the larynx, epiglottis, and pharynx, became covered with false membranes, as has been likewise noticed by Rokitansky.†

Variola.—The attention of pathologists has of late been much directed to the antagonism of small-pox towards other diseases, and especially in regard to the other exanthemata. Mr. Pittock, of Sellinge, relates a case of variola and the vaccine eruption occurring together; the former predominated, and the child died‡.

In reference to this subject, we have also the extensive researches of Legendre, who considers that it is now fully established, that if a child be inoculated with small-pox matter on the fifth day after vaccination, the variola will have only a local, and not a constitutional effect. Spontaneous variola is said, however, not to be subject to this law, though its intensity is greatly modified; and, indeed, M. Legendre inclines to the very probable supposition, that in the majority of such instances the poison of variola has been long present, undeveloped in the system. He states also, that weakly children under four years of age, incur great danger by being vaccinated after they have been exposed to the contagion

* *Guy's Hospital Reports*, April, 1845, p. 131.

† *Dublin Journal of Medical Science*, September, 1844.

‡ *Provincial Medical and Surgical Journal*, August, 1844, p. 343.

of variola, for in such case vaccination seems to hasten the progress of small-pox, instead of allaying its dangers.

FORENSIC MEDICINE.

Perhaps at no period in the brief history of English medical jurisprudence have more important questions been discussed in relation to this subject than during the past twelve months. The cases of Belaney and of Tawell, the Scottish trials for poisoning by arsenic, &c., have originated such a mass of essays and papers on toxicology, that it is only possible here within the limits of this Address to notice, in the briefest possible manner, the chief facts that have been established or impugned.

Arsenic.—We are, perhaps, now scarcely justified in placing this mineral at the head of the list of poisons, as of late years death by its administration has become rare, in comparison to the increased frequency of poisoning by prussic acid.

A singular case of recovery after taking a very large dose of arsenious acid, at least two ounces, is related in the American journals; and the patient, a lunatic, did not only not lose his life, but actually recovered his senses! We must own that we feel considerable reluctance in giving to this story the credit that it claims.*

The researches in reference to arsenic have been chiefly directed to the trial of antidotes, and to the detection of the poison in the body after death. Numerous additional instances have been recorded where the hydrated peroxide of iron proved successful in counteracting the effects of the poison. It seems also, from the case recorded by Mr. Argent, of Hinckley,† that if arsenious acid be swallowed with, or soon after, a full meal, its effects will be much retarded, and the matters previously eaten will probably protect for a time the coats of the stomach, and serve as a vehicle if the poison be ejected by vomiting. According to Dr. Krafft, large draughts of milk and water favour, instead of retard, the action of the hydrated peroxide as an antidote. The good effects of this preparation are also strongly corroborated by Dr. Flechner, who

* *American Journal of the Medical Sciences: Lancet*, 1844.

† *Lancet*, 1844, vol. ii., p. 103.

gave it with great success, in small and gradually increasing doses, to five individuals, who had been poisoned by drinking water from a spring, in the immediate vicinity of which a quantity of cobalt ore, containing arsenic, had lain during the winter. Dr. Flechner also communicates the interesting fact, that it is a common practice among the Tyrolese and Styrian hunters, to swallow as much as two grains of arsenious acid, as a tonic and invigorant, before setting out on their long and perilous mountain journeys.*

Ollivier d'Angers confirms the truth of Orfila's observations, that arsenic, when existing in the earth of church-yards, will not impregnate bodies buried therein; but that, on the other hand, bodies containing arsenic will, as they decay, impart this poison to the surrounding soil. The presence of arsenic normally in various soils presents a most interesting subject for future investigation.

Tests for Arsenic.—Fresenius, of Giessen, maintains that the only certain and satisfactory test of arsenic is that of reducing it to the state of sulphuret; and he has also suggested a novel and, we think, more satisfactory mode of decolorization by chlorine. A good modification of Marsh's test, by which none of the arsenic can be lost, and the troublesome frothing of the animal matters in the apparatus is obviated, has been communicated by Berzelius to the Prussian Government. Other modes of testing the presence of arsenic have been proposed by Dr. Ayres, and by Mr. Letheby.

Opium.—Mr. Letheby† has succeeded in detecting the presence of opium in the stomach by the usual tests, not less than twelve days after death.

The most ample researches of recent date on poisoning by this drug are those of Mr. Taylor.‡ From this gentleman's experiments it appears that iodic acid is the most delicate test of the salts of morphia, when unmixed with other matters, but it is not applicable when the poison is mixed with coloured organic fluids; moreover, that in many cases of child-poisoning by opium, such as that on which Mr. Taylor has founded his observations, we cannot expect

* *Transactions of the Vienna Medical Association*, in the *British and Foreign Medical Review*, January, 1845.

† *Lancet*, 1844.

‡ *Guy's Hospital Reports*, April, 1845, p. 269.

to find traces of the poison in the stomach or intestines, as the quantity sufficient to destroy the life of an infant will yield too little morphia to be detected by any known re-agents. Meconic acid may, however, be discovered in many cases where no morphia can be found, as under favourable circumstances the sesqui-chloride of iron will show the meconic acid contained in the 160th part of a grain of opium.

Hydrocyanic Acid.—Of all the means by which the suicide terminates his life, or the murderer destroys his victim, this deadly poison is perhaps the most efficacious; and in this country we have obtained an unenviable notoriety for its use. It is only, indeed, in Great Britain, where every shop-boy has access to, and can distribute, the most deleterious drugs, where no law exists regarding the sale of poisons, that hydrocyanic acid can be obtained by any one desirous of terminating either his own life or that of another.

The two most remarkable criminal trials that have recently occurred in relation to this poison are those of Belaney and of Tawell. In the former case, if we regard the medical testimony alone, its confined and uncertain nature, and the evidently contradictory opinions maintained by divers witnesses, we might say that the accused certainly could not have been condemned upon that portion of the evidence; and we may also assert, that much of what was then advanced has been contradicted by subsequent cases and investigations. Since the trial of Belaney many circumstances have concurred to prove that the death-shriek, to which some of the medical witnesses so confidently spoke on that occasion, does not necessarily occur, nay, it is doubtful if it ever takes place in the human subject. Even in animals it has been found that many die without uttering any shriek whatsoever. "The occurrence of a cry or shriek, therefore," says Mr. Taylor, of London, "in poisoning by this acid, must be regarded as a purely accidental result, to which no medico-legal importance can be attached."*

Another, and a still more important question is, as to the degree of volition enjoyed by individuals after swallowing prussic acid in poisonous doses. This question was agitated on occasion of a trial some years ago; and the recent cases have, we think, sufficiently

* "Report on Toxicology," in the *British and Foreign Medical Review*, October, 1841; and Case by Mr. Hicks, of Newington, in the *Medical Gazette*, April 11, 1845, p. 898.

proved, that many acts which require deliberation and some considerable period of time, may be performed before the individual loses all consciousness. Thus, in the instance related by Mr. Godfrey,* a gentleman swallowed half an ounce of prussic acid, and then walked deliberately fifty-five paces and down seventeen steps, into the druggist's shop, where he asked for more of the poison, before the fatal effects of the previous dose became manifest.

In one of two instances of death by prussic acid, which have occurred under our own observation in Newcastle, the suicide, an apothecaries' assistant, had swallowed an ounce of prussic acid, of great strength, and was apparently able afterwards to cork the bottle and thrust it through the hedge of the high road, on which he was found forty yards from the spot where the phial was subsequently discovered.

That death from prussic acid is not always attended with convulsions, as has been generally supposed, is partly proved by the quiet, composed attitude in which several suicides by this poison have been recently found, especially in the case of the double suicide recorded by Mr. Letheby.† It is, however, ingeniously suggested by Mr. Taylor, that, as has been observed in animals, convulsions may occur with intervals of repose, and that they may take place, perhaps, before consciousness is so entirely lost as to prevent the sufferer from assuming a quiet aspect and position in death.

Another interesting question, which has been much agitated during the recent trials, is with regard to the amount of evidence afforded by the odour of prussic acid in the body after death. It was well ruled by the judge, in the case of Tawell, that the presence of the odour was a proof of the poison being there; but that, on the other hand, its absence was no positive proof that the poison had not been taken. The stomach usually retains the peculiar odour longer than any other organ. In the case in question, no smell of bitter almonds could be detected in the body of Sarah Hart by most, if not by all, present at the dissection; yet the existence of the poison was distinctly proved by the appropriate tests.

Mr. Taylor considers the nitrate of silver and the Prussian blue tests as nearly of equal delicacy and value, and that by these means

* *Prvoincial Medical and Surgical Journal*, September 25, 1844.

† *Lancet*, 1844, vol. ii., p. 336.

we can discover the presence of about one-fiftieth of a grain of anhydrous acid in the body. For general use, he prefers the Prussian blue test, because it is extremely difficult to obtain cyanogen from very minute quantities of the cyanide of silver.

With respect to the minimum quantity of hydrocyanic acid capable of producing death, we have one instance recorded where nine-tenths of a grain of anhydrous acid proved fatal; and it is probable that even half a grain might prove destructive to human life. All antidotes to prussic acid will, on account of the fearful rapidity of its action, prove but of inferior and relative value. The Messrs. Smith, of Edinburgh, have however stated, that the sulphate of iron, combined with an alkaline carbonate, is an efficacious remedy; and they corroborate this assertion by ingenious chemical formulæ, and by the result of their experiments on animals. Everything, however, seems to depend upon the rapid administration of the antidote.*

Dr. Bull, of Hereford, has recorded a fatal case of poisoning by the essential oil of bitter almonds, which presents many points of interest, and where death was apparently produced by about fifteen or seventeen drops of the undiluted oil. It is much to be regretted that so dangerous an ingredient should be so carelessly employed in domestic cookery.†

Phosphorus.—Mr. Reedal, of Sheffield,‡ has narrated an instance of poisoning by phosphorus, where there ensued fatal inflammation of the cæcum and colon, as also of the brain and pleura. Although the boy had not taken any phosphorus for ten days previous to his death, we think Mr. Reedal perfectly justified in ascribing the event to its well known irritating properties.

The admirable remarks by Dr. Cowan, in the Address of last year, on the necessity of medical education for coroners, have been but too frequently verified by instances of the greatest ignorance and indifference to medical evidence, on the part of some of these functionaries, during the past year. Indeed, so long as the law remains in its present state,—so long as the ancient office of coroner is awarded to any but medical men,—we

* *Lancet*, October 5, 1845, p. 54.

† *Provincial Medical and Surgical Journal*, September, 1844, p. 364.

‡ *Lancet*, September, 1844, p. 364.

must expect such scenes as have recently occurred, and remain patiently, and almost without hope, for improvement in this branch of forensic medicine. How far are we behind other countries of Europe in this regard! In almost all continental states each district has its superintending physician, whose duties are in part similar to those of the coroner of England, who must examine, either personally or by deputy, into every suspected case, and who must transmit to a higher court of medical and legal officials, a full report, not only of the circumstances attending the death, but, moreover, a complete history of the appearances observed on the *post-mortem* examination. In this country the coroner, himself, too often partakes of the vulgar prejudices against dissection; and should he be superior to these, he is in perpetual peril of rebuke, if not of absolute pecuniary loss, from the bench of magistrates, on presenting his quarterly accounts. We trust ere long that the absurd and mischievous condition of our English law respecting coroners will be ameliorated.

MATERIA MEDICA.

From the zeal and perseverance with which botanical researches are now prosecuted in tropical lands, and, on the other hand, from our daily increasing experiments in forming new products and combinations in chemistry, it is natural to expect that our materia medica will become considerably enriched.

Bebeerine.—Of perfectly new remedies we have but one or two properly so called. Dr. A. D. Maclagan, of Edinburgh, has introduced into practice the sulphate of bebeerine, the existence of which, as a vegetable alkali, was first pointed out by Dr. Rodier, of Guiana, where the bebeeru, or green-heart tree, is found. In its therapeutical effects this salt appears to be analogous to quinine, but it possesses, in addition, the very great advantage of not causing any febrile excitement in the system.*

Piscidia erythrina.—Mr. Hamilton† has made some personal experiments on the narcotic effects of the Piscidia erythrina, or Jamaica dogwood, which has long been employed by the negroes in

* *Edinburgh Medical and Surgical Journal*, April, 1845, p. 359.

† *London Journal of Pharmacy*, 1844.

that country for the purpose of narcotizing fishes. Mr. Hamilton swallowed, in the evening, an ounce of the alcoholic tincture, prepared from the bark of the root. He experienced a sensation of intense heat in the stomach, and then immediately fell into a sleep so profound, that, on awaking some twenty-four hours after, he still held in his hand the phial containing the residue of the tincture. The violent toothache, for which he had tried this remedy, had entirely ceased, and no injurious results ensued from the action of so powerful a narcotic.

Quinine.—M. Bourrieres has proposed the arseniate of quinine as a substitute for arsenious acid, in cases where that poison is exhibited as an anti-periodic. Further experiments on the valerianate of quinine have also been made by M. F. Devay. He has found it to be valuable in those cases where a combined tonic and sedative effect was required, as in low forms of fever, with nervous excitability; in intermittents of bad character; and in neuralgic and hysteric complaints.

Cannabis Indica.—The real virtues of this drug may still be considered doubtful, though much probably depends upon the goodness of the extract employed. It seems very probable that its efficacy is less in this country than in India, whether from the influence of a colder climate, or from the effects of the long sea voyage. But while we have the testimony of Mr. Donovan, and of so many others, in its favour, we must consider the extract of Indian hemp as worthy of a further trial in our materia medica.

MESMERISM.

Our Address would not be complete did we not allude to the subject of mesmerism; but the brief space allowed forbids us to mention either fact or theory here, for the one requires detail, and the other arguments, to render it intelligible. During the past year this so called science has been subjected to the most searching and candid trials, by men as much distinguished for their talents as for their strict impartiality. We are bound to say, that in no one instance does mesmerism appear to us to have stood the test of real investigation; and we state this with pain, as we are aware that its doctrines have been upheld and defended by, at least, one

learned and most conscientious member of this Association. But, in making this assertion, we impute no shade of deceit or imposture to many excellent and single-minded individuals—far from us be the thought thereof; but we do believe them to have laboured under false impressions, and that the mesmerised themselves have often been thoroughly convinced that they were under the influence of some extraordinary power. We ourselves adhere to the opinion of the great majority of the profession,—that all that has appeared wonderful in mesmerism, exclusive of manifest imposture, may be explained by natural causes and effects, without the aid of any specific power hitherto unknown or unappreciated.

BIBLIOGRAPHY.

Works of transcendent merit are in our science comparatively scarce, for genius alone, without a long and patient train of study and observation, will not, either in the practical or literary department of medicine, ensure permanent success. We have already noticed in the course of our observations, several of the more important books that have appeared during the last twelve months, but the bare catalogue of all that has been published would extend far beyond our prescribed limits. Physiology has been enriched greatly by the anatomical and pathological observations of the Messrs. Goodsir, by the essay of Mr. Simon on the thymus gland, and by the microscopical researches of many British and continental observers, among whose names we mention with great pleasure that of Mr. Addison, of Malvern. The works of Mulder, of Utrecht, have already been translated into several languages, and have obtained for the author an European reputation.

The pathology of cerebral disease has been illustrated by the works of Scipion Pinel, and of Rollet, of Nancy, and by the essays of Dr. Gustav Spiess, of Frankfort, and of Ludwig Mauthner, in Vienna. The work of Fourcault, on chronic diseases, comprises very valuable data regarding the origin and causes of pulmonary phthisis, and the lectures of Dr. Evans, of Dublin, on this malady, contain views differing materially from those generally received. Dr. Latham has republished his Lectures on "Clinical Medicine," or, rather, has produced an entirely new work under this title, the first volume being devoted to the consideration of diseases of the heart; it exhibits all the originality and well-known talent

of this distinguished writer. Finally, we notice with peculiar satisfaction Dr. Golding Bird's excellent little volume on "Urinary Deposits," in which this difficult subject is treated with so much conciseness and discrimination, as to render the work a most valuable acquisition, both to the student and to the practitioner.

The difficulty experienced by those largely employed in the duties of our profession, and especially by that most important class, the general practitioner, of obtaining a good knowledge of the current medical literature of the day, will, we think, be greatly diminished by the publication of a periodical volume by Dr. Ranking, of Bury St. Edmunds, containing a brief but excellent summary of the most recent researches. The success of *Kleinert's Repertorium* and of *Schmidt's Jahrbücher* in Germany, and of Mr. Braithwaite's excellent Retrospect in this country, amply demonstrates the practicability of such an undertaking. Dr. Ranking has, in his first half-yearly volume, now before the public, adopted the excellent plan of engaging men eminent in various departments of our science, to furnish reports of the recent progress of those branches to which they have peculiarly devoted themselves.

OBITUARY.

It is every year a mournful task to record the departure from this life of some of the brightest ornaments of our profession; but there is consolation in the thought that the memory of many of those who have gone before us will live, not only in the works that they have written upon science, but in the records of the good they have effected as members of the great Christian community. The stigma of infidelity, of unbelief in a high Providence and a merciful Redeemer, which has been so often and so unjustly imputed to medical men, cannot, at least, be laid to the charge of those whose death we have this year to deplore.

One of the brightest ornaments of the Christian world, as a moralist and as a religious-minded man, was Dr. Abercrombie, of Edinburgh, whose sudden demise we have already alluded to in another part of this Address. It is unnecessary to name his works; perhaps, of all others, his esssay on the "Diseases of the Brain," was that on which his fame as a scientific pathologist principally rested, while as a Christian philosopher we may point with great pride to his "Essays on the Intellectual Powers," to his "Philosophy

of the Moral Feelings," and to his "Elements of Sacred Truth for the Young." We cannot pay a better tribute to the memory of so eminent a man, than by quoting from the last work the words of the eminent author in the preface:—"The ambition that now remains to him is to have his name associated with those solemn and sacred hours, when the Christian parent calls around him the children of his heart, and feeling all the uncertainty of life which is passing over them, seeks to raise their minds to a life that is never to end." And who will say that this holy ambition, even long before the author's death, was not amply realized?

In England Dr. W. Wright, of Norwich, Dr. Elliott, of Carlisle, Mr. W. Duke, of Hastings, Dr. James Thompson, of Burnley, and Mr. Kipling, of Newport Pagnel, have paid the great debt of nature. All these were men more or less distinguished in their respective spheres, though perhaps less generally known than Dr. Ingleby, of Birmingham, whose demise we must lament as a most serious loss, especially in that department of our science to which he had so prominently devoted himself. Edinburgh has lost also Dr. James Home, the late Professor of the Practice of Physic in that university, where, for a long period of years, he held different professional chairs. On the continent death has been less busy among the eminent men of our profession; but Paris must lament the demise of Breschêt, the industrious and distinguished cultivator of anatomy and physiology, and whose researches upon the skin have ensured for him a lasting reputation.

It has been to us a deep source of gratification, amid the heavy labour of condensing into this brief survey the enormous mass of materials presented to us during the past year, to know that we were to address an auditory well calculated to judge of our merits such as they might be, and disposed to overlook our deficiencies such as they really are. Whatever may be the defects of this Address, we trust our good-will in endeavouring to meet your wishes, will obtain your approbation.

THE

RETROSPECTIVE ADDRESS IN SURGERY,

FOR THE YEAR 1844–5.

BY THOMAS P. TEALE, ESQ., F.L.S.,

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DELIVERED AT THE THIRTEENTH ANNIVERSARY MEETING

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION,

HELD AT SHEFFIELD,

ON WEDNESDAY AND THURSDAY, JULY 30TH & 31ST, 1845.

The time allotted to the reading of the Retrospective Addresses being necessarily limited, and the subjects embraced by a survey of the vast field of surgery during a period of two years being both numerous and important, I feel it to be imperative upon me to proceed at once to the immediate business of my Address, without occupying the time of the Association with any prefatory remarks.

The materials which I have selected may be conveniently arranged under the following departments:—

I. General Surgical Pathology.
II. General Surgical Therapeutics.
III. Special Surgery.
- *a.* Of the Bones.
- *b.* „ Articulations.
- *c.* „ Arteries.
- *d.* „ Head.
- *e.* „ Spine.
- *f.* „ Neck.
- *g.* „ Thorax.
- *h.* „ Abdomen and Pelvis.

Observing this order, which is, however, more or less arbitrary, I shall proceed to notice, in detail, the subjects to which I would especially solicit the attention of the Association.

I. GENERAL SURGICAL PATHOLOGY.

Spontaneous, or Sympathetic Gangrene.—The conflicting opinions relative to spontaneous gangrene advanced by several high authorities during a recent judicial inquiry, have invested the subject with unusual interest, and may claim for it a share of our present consideration.

It is well known that M. Dupuytren supposed this affection to depend upon inflammation and consequent obstruction of the arteries; and that, in accordance with this opinion, he substituted a moderate antiphlogistic treatment for the tonics and stimulants formerly in vogue.

It can scarcely be denied that the views of M. Dupuytren have extensively influenced the profession, and that the treatment which he has advocated has proved highly beneficial, in a large proportion of the cases in which it has been employed; yet it is open to inquiry, whether this distinguished surgeon has not taken too limited a pathological view of the subject. It may, I think, be fairly doubted, whether obstruction of an arterial trunk is alone sufficient for the production of gangrene. If we obstruct, by ligature, the chief artery of a limb, the parts below the ligature retain their vitality, provided the veins remain pervious. If, on the other hand, the large venous trunks of a limb become loaded with fibrin, an œdematous condition, usually named phlegmasia dolens, is produced, but gangrene does not occur if the arteries are pervious. When, however, both the arterial and the venous trunks are simultaneously obstructed, gangrene is the result.

In support of this proposition, even the cases of M. Dupuytren may be adduced, as well as numerous recent observations.

In two only of the four cases of gangrene related in the *Leçons Orales,** in support of the views of Dupuytren, is the state of the veins noticed; and, in both, not only was there disease of the arteries, but the veins were also affected, being obstructed with fibrin.

A remarkable instance of disease of the vascular system, attended with gangrene, has lately been recorded by Dr. Duncan. The

* Tome iii.

aorta was obstructed to the extent of an inch above its bifurcation, by an adherent yellowish mass, which, on the left side, extended along the iliac artery into the commencement of the common femoral. On both sides the femoral veins were plugged with coagula. It is interesting to observe, that in this case both lower limbs had been œdematous, both femoral veins having been obstructed; but gangrene occurred only in the left leg, on which side the artery, as well as the vein, was obstructed.

Mr. Carmichael* has related to the Surgical Society of Ireland, a case of gangrene of the left leg, in which the left iliac artery and the left iliac and femoral veins were filled with fibrine.

In a case of gangrene of the left leg, recorded by Dr. Hutton,† of Dublin, as an instance of arteritis giving rise to the moist or inflammatory form of gangrene, the femoral vessels, both artery and vein, were filled with coagula.

Mr. Bottomley,‡ of Croydon, has lately amputated above the knee with success, for spontaneous gangrene of the foot and ankle. The femoral artery and vein were found plugged up with a transparent, semicartilaginous, elastic substance.

Since the publication of M. Dupuytren's Lectures, I have, on several occasions, directed the attention of my hospital pupils to the effect of simultaneous obstruction of the arterial and venous trunks of a limb in producing gangrene. There is now on the table an example of fibrinous obstruction of the left femoral artery and vein, taken from a patient who lately died in the Leeds Infirmary, affected with gangrene of the left leg.

As to the origin of these deposits in the blood-vessels, M. Dupuytren was evidently in error in regarding them exclusively as the result of inflammation; for, although inflammation may be their most frequent cause, yet, as Drs. Carswell and Bright have maintained, other causes influencing the blood may produce a deposition of fibrin within the large vessels. Mechanical obstruction of the arteries and veins, from causes external to the vessels, may likewise be productive of gangrene.

Admission of Air into the Veins.—An instance of the serious

* *Dublin Medical Press*, February 19, 1845.

† *Dublin Medical Press*, February 19, 1845.

‡ *Lancet*, July 19, 1845.

effects produced by the admission of air into the vascular system has been recorded by Mr. Bransby B. Cooper.* After having amputated the arm at the shoulder-joint for a carcinomatous tumour, he proceeded to remove an enlarged gland from the axilla; and whilst he was thus engaged, a gurgling noise was heard, and his patient instantly fell into a most alarming state of collapse. An hour and a half elapsed before she could be removed from the operating theatre. She was afterwards affected with involuntary discharges of urine and fæces, and convulsive movements of the right leg. In a fortnight she was convalescent.

A few years ago this subject was specially investigated by a commission of the Royal Academy of Medicine,† of Paris, and more recently by Mr. Erichsen‡. For an extended report of the inquiries of the French commission, I must refer to the sixth volume of the *British and Foreign Medical Review;* and on this occasion shall avail myself only of such a brief notice of their labours as may serve for an introduction to the subsequent researches of Mr. Erichsen.

The following propositions embody the principal results obtained by the experiments of the commission relative to the conditions under which air may enter the veins:—

1. When an opening is made into a vein at any point at which the venous pulse exists, air immediately enters.

2. If an opening be made into a vein a short distance beyond the point at which the venous pulse exists, air may enter, provided the orifice be kept open; but if the opening be made a considerable distance from the site of the venous pulse, no air enters, though the orifice be kept open and the admission of air be encouraged as much as possible.

It had been previously shown by Barry and Poiseuille, that during inspiration the blood of the large veins flows more freely towards the heart, and that during expiration it regurgitates. In the experiments of the commission, the venous pulse thus produced, was observed in the lower third only of the external jugular vein; it was present also in the subclavian, but did not extend to the axillary and brachial veins. If, as has already been stated, an

* *Medico-Chirurgical Review*, vol. xxvii.

† *British and Foreign Medical Review*, vol. vi.

‡ *Edinburgh Medical and Surgical Journal*, January, 1844.

opening be made into a part of a vein somewhat beyond the situation of the venous pulse, and the aperture be kept open, air still gains admission; but if the aperture be not put on the stretch, the pressure of the atmosphere approximates the sides of the vein, and the air does not enter. The introduction of a tube, however, by preventing the collapse of the vein, ensures the free admission of air, and a rigid state of the coats of the vein has also the same effect.

Mr. Erichsen, regarding these points as established by the commission, proceeds to investigate the proximate cause of death after the spontaneous introduction of air into the veins,—the means calculated to prevent this accident,—and the treatment which may best obviate its injurious effects. The following are the conclusions at which he has arrived:—

1. That the primary arrest of the circulation takes place in the capillaries of the lungs, or commences probably, in some cases, in the terminal branches of the pulmonary artery, in consequence of inability of the right ventricle to overcome the mechanical obstacle presented by air-bubbles in these vessels.

2. That respiration and animal life cease in consequence of a deficient supply of arterial blood to the central organs of the nervous system.

3. That as the air enters the veins in quantity, in force, and in rapidity, proportioned to the depth of the inspirations, the best mode of preventing the occurrence of the accident, or, at all events, of lessening its probable fatality, would be, in all operations about the dangerous region,—namely, the root of the neck and summit of the thorax,—to bandage the chest tightly with broad flannel rollers or laced napkins, so as to prevent deep gasping inspirations, and to keep the breathing as shallow as possible, consistently with the comfort of the patient.

4. That if air have already gained admission, its further entrance should be prevented by compressing, or, if possible, by ligaturing the wounded vein by which it had entered.

5. That a due supply of blood to the brain and central organs of the nervous system should be kept up, by placing the patient in a recumbent position, and compressing the axillary and femoral arteries.

6. That the action of the heart should be maintained by artificial

respiration and friction in the precordial region, until the obstruction in the capillaries can be overcome or removed.

7. That artificial respiration should be maintained, for the purpose of removing, if possible, the obstruction of the capillaries of the lungs.

8. That if the patient survives the immediate effects of the accident, the supervention of pneumonia or bronchitis should be guarded against.

Fibrous Tumour.—M. Cruveilhier,* in an important communication to the Academy of Medicine, Paris, has maintained that the breast is very frequently the seat of fibrous tumours; that these tumours never degenerate; and that, being a purely local affection, they do not form again when once extirpated; and, therefore, that their extirpation is not necessarily indicated. These fibrous bodies, he states, are often mistaken for cancer. Their characteristics are, a spheroidal shape, perfect circumscription, mobility, and independence of the tissue of the organ in which they appear. He has found that a certain proportion of them are hollow, and sometimes contain a viscous synovial kind of fluid.

In the discussion which followed, M. Velpeau, in some respects, agreed with M. Cruveilhier. He admitted that there are fibrous tumours of the breast which do not endanger the life of the patient, and which are not liable to degenerate. But as, generally speaking, we are doubtful as to the true nature of such tumours, as their presence is a perpetual source of torment and anxiety to the females affected with them, and as the operation by which they are extirpated is nearly always an "innocent" one, he considers that there is no reason why we should hesitate to extirpate them.

M. Blandin did not believe it possible to distinguish them during life, the characters assigned to them by M. Cruveilhier being also common to encysted cancerous tumours. He believed that fibrous tumours of the breast are comparatively rare; that they are subject to cancerous degeneration, although such change does not frequently occur; that they cannot be accurately distinguished; and that, consequently, they ought to be extirpated as well as cancers, with which they have the greatest symptomatical analogy.

M. Roux admitted the existence of non-malignant tumours of

* *Lancet*, March 30, 1844.

the breast, and considered that, in this respect, surgery was more advanced than M. Cruveilhier supposed. In proof of this opinion, he referred to the writings of Sir Astley Cooper, Mr. Travers, and other English surgeons. As to the non-degeneration of fibrous formations and their incompatibility with cancers, he regarded it as a gratuitous hypothesis. He thought that, whatever was the presumed nature of the tumour of the breast, if it resisted all the various modes of treatment calculated to effect its resolution, it should be at once extirpated. MM. Amussat, Berard, and Lisfranc, agreed that it was difficult, if not impossible, to recognise the real nature of the kind of tumour described by M. Cruveilhier, and thought that such tumours ought to be extirpated, if the means of treatment which we possess fail to produce resolution.

As an appendix to these opinions of the leading Parisian surgeons, I may here mention the circumstances regarded by Sir Astley Cooper as more especially characteristic of non-malignant tumours, namely, the youth of the patient, and the soundness of the general health.

Carcinoma.—Our Parisian neighbours, if we may judge from the recent discussion on fibrous tumours of the breast, regard operations for the removal of carcinomatous affections with greater favour than the surgeons of this country. The following summary of the opinions recently expressed by Sir Benjamin Brodie,* relative to operations for carcinoma of the breast, I believe is a fair representation of the sentiments generally entertained by British surgeons on this important subject:—

When there is a general conversion of the glandular structure of the breast itself into a scirrhous structure, there being no well-defined margin, an operation never succeeds, but rather hastens the progress of the disease. When the skin is contaminated by scirrhous tubercles, disseminated here and there around the tumour, or has become thickened and brawny, the pores being enlarged as if they were seen through a magnifying glass, there is no chance of making a permanent cure. When the nipple is retracted, the case is very unfavourable for operation. Sir B. Brodie suspects, in this case, that the disease has extended to the skin, and if the skin in the neighbourhood of the nipple be examined, there will

* *Lancet*, February 3, 1844.

generally be found indications of disease in it. A dimple or indentation over the tumour, is also an indication of the skin being affected and renders the case unfavourable for operation. When the glands of the axilla are enlarged, not from simple irritation, but from cancerous affection, no ultimate cure is to be expected from operation. When the scirrhous tumour adheres to the pectoral muscle and the ribs, and when the skin is ulcerated, there is no chance of a permanent cure from operation. When there is evidence of malignant disease of the liver, the lungs, the womb, or other internal organ, no permanent benefit can result from the removal of the breast. When all these cases of cancer are taken away, there are very few left in which it is right to operate. What are the cases, then, in which an operation for the removal of the breast is proper? Sir B. Brodie gives the following reply:—

"When the skin is perfectly sound; where the nipple is not retracted; where there is no diseased gland in the axilla; where there is no sign of internal mischief; where there is no adhesion of the breast to the parts below; and where the patient is not very much advanced in life; I should say that there is a reasonable chance of an operation making a cure. I do not intend to say, that in all the excepted cases there will be a permanent cure—far from it; but there will be in some instances, and the chance of it may be sufficient to warrant you in recommending the patient to submit to the operation. I have the satisfaction of knowing, that several persons on whom I have operated under these circumstances, are now alive and well, but who would certainly have been dead long since had I not had recourse to it."

Sir B. Brodie also considers that we may be sometimes justified in operating for the purpose of affording the patient a respite from present suffering, although we cannot hold out an expectation of cure.

Osteoid Tumours, or Ossifying Fungous Growths.—Under the term of osteoid tumours, Professor Müller* has described certain malignant tumours, leading to the destruction of the organism, which consist, for the most part, of osseous substance, and occur secondarily, not in the bones alone, but in the soft parts.

* *British and Foreign Medical Review*, April, 1845.

The osteoids are described by Professor Müller, as irregularly knobbed tumours, which develope themselves, sometimes slowly in the course of some years, and sometimes rapidly, growing, for the most part, first, on bones, and from their surface, attaining often an enormous size, and, consisting chiefly of osseous substance, in the interspaces of which there is an unossified formative part, of the firmness of fibro-cartilage. The condition of the osseous substance is sometimes very porous and brittle, and split up on the surface into innumerable lamellæ and fibres; sometimes, on the contrary, it is firmer, and more like healthy osseous tissue. The outer part of the tumour never forms a smooth rounded shell about the soft part, such as is found in enchondroma, neither is the bone ever distended into a sac. The minute structure of the osseous substance is like that of all bones. The unossified part of the tumour is a greyish-white and usually firm substance, traversed by vessels, and has no similarity to the substance of medullary fungus. Under the microscope it appears as an indistinctly fibrous net-work, with very small interspaces, and here and there scattered primitive cells, or nuclei. It is in every respect similar to the animal basis of the already ossified part, and thus is prepared for ossification. It is distinguished from cartilage as well by its structure as by its chemical condition. On boiling, it yields gelatine, but no chondrine. These tumours result from a tendency to a morbid, increasing and destructive formation of bone, which usually is situate at first on one bone, but afterwards extends over other parts of the osseous system, and, what is of essential importance, attacks also other parts besides bones; so that, before or after the amputation of the affected limb, osteoids, completely independent of the bones of the skeleton, may form in the soft parts; for instance, in the cellular tissue, the serous sacs, the lungs, lymphatic glands, or interior of the large vessels. The consecutive osteoids may appear in the looser, porous, lamellar form, as well as in that of the most compact and hardest bone; so that sometimes very firm osteoids of other parts follow primary looser osteoids on the bones; or, in one and the same body, some parts develope the loosest, others the firmest osteoids.

In their general character, these growths are so far like cancer that Müller suggests the question, whether they might not be regarded as a form of cancer, and called *carcinoma osteoides*. Only

in two circumstances they differ, namely, that they rarely, if ever, soften, and that the exchange of osteoids as equivalents with other cancers, or, in other words, that the occurrence of osteoids after removal of carcinoma of the breast, or carcinoma following the removal of osteoid tumours, is not yet sufficiently established.

Pulsating Tumours of Bone.—It has long been known that some tumours, originating in the bones, pulsate more or less strongly, and may simulate aneurism. So closely, indeed, do they sometimes resemble aneurism, that they have on many occasions been mistaken for this disease by surgeons of the highest reputation. These tumours have of late been named osseous aneurisms, but the appellation does not appear to me to have been fortunately applied. By M. Dupuytren they were regarded as an accidental developement of erectile tissue, generally more or less complicated with the cancerous element.

Numerous instances of these affections have been recorded by Dupuytren,* one of which strongly illustrates the difficulty attendant upon their diagnosis. In this case the opinions of Dupuytren and his colleagues were repeatedly wavering, at successive visits, between aneurism, abscess situated over an artery, and fungoid disease. At length an exploratory puncture was resorted to, when the tumour was pronounced to be malignant. The dissections of these tumours related by Dupuytren, have thrown much light on their internal structure. A pulsating tumour of the tibia which he has described, presented a honeycomb appearance, being composed of numerous cells, filled with coagulated blood, which was arranged in concentric layers in the individual cells, the external layers being paler and more fibrinous than the internal, which resembled in colour and consistency a common clot of blood. Water injected into the artery escaped into the centre of the cysts, evidently showing that each cyst was supplied with a special artery.

In many cases, cysts containing serum, or the carcinomatous element, and spiculæ of bone, were intermixed with this cellulo-vascular structure. Many of these tumours, even when their character was understood, have been designedly treated by ligature of their principal arterial trunk. In some instances, when thus treated, the tumour diminished in size, ceased to pulsate, or was

* *Leçons Orales*, tome iii.

arrested in its growth; but such effects were uncertain, and the benefit was seldom permanent. In one case related by Dupuytren, the tumour was reduced in size, and remained stationary seven years, when it rapidly increased in size. In this instance the cancerous element became largely developed in the tumour.

I have made these introductory observations as they may throw light upon some recently recorded cases, to which I must now allude.

A case of pulsating tumour of the femur has lately occurred in the practice of M. Nélaton;* it chiefly occupied the internal condyle. On placing the hand upon it, a distinct pulsation was perceived, synchronous with each beat of the femoral artery. Pressure on the artery arrested the pulsation in the tumour, and caused it to become soft and to diminish somewhat in size. On applying the ear, a slight sound, synchronous with the arterial pulsation, was perceptible. A ligature was applied to the femoral artery, in the hope of arresting the growth of the tumour. The pulsation immediately ceased, but returned after seven days. The result of the operation was unsuccessful.

A case of pulsating tumour of the ilium, supposed to be aneurism, recently occurred at St. Bartholomew's Hospital. Mr. Stanley describes the tumour as pulsating throughout its whole extent; not with a thrill or vibration, but with a deep heavy beat of aneurism; and a bellows-sound was distinctly audible. A ligature was applied to the common iliac artery. The patient died on the third day, from peritonitis. The tumour, on dissection, was found to be composed of a spongy tissue, with cells and convoluted vessels distributed through it. In the wall of the left ventricle there was a medullary tumour, of the size of a filbert. After relating the case to the Medico-Chirurgical Society, Mr. Stanley alluded to several others, in which tumours originating in the bones had been mistaken for aneurism. Two such had occurred at St. Bartholemew's Hospital: one was an encephaloid tumour of the humerus; the other a morbid growth, consisting of a soft fibrous and dense osseous structure, originating in the femur, and supposed to be popliteal aneurism. Mr. Stanley also referred to a case of great interest, which had occurred to Mr. Guthrie. In this instance, a medullary tumour, situated in the gluteal region,

* *Lancet*, April 12, 1845.

presented so decidedly the characters of aneurism, that it was regarded as such by Sir Astley Cooper and other surgeons, and accordingly Mr. Guthrie applied a ligature to the common iliac artery.

Intimately connected with this subject, but not coming within the designation of pulsatile tumour, is a case which recently fell under my own care. A young man presented himself at the hospital, having a tumour which filled the popliteal space and projected a little anteriorly above the inner condyle of the femur. It was generally firm, but elastic in some parts, and conveyed a suspicious feeling of the presence of deep-seated fluid. No pulsation could be detected in it, nor was its size altered by compressing the femoral artery, and no unnatural sound was audible. I determined upon making an exploratory puncture, which being done, a pulsatile column of florid blood was projected to the height of seven or eight inches. On the following day, in consultation with my colleagues, Mr. Smith and Mr. Hey, the puncture was repeated in another part of the tumour, when a pulsatile column was again projected, and several ounces of florid blood rapidly escaped. Notwithstanding this phenomenon, we were inclined to the opinion that the disease was one of the more vascular forms of carcinoma, but we nevertheless thought it prudent to tie the femoral artery before proceeding to amputate. I therefore placed a ligature on the femoral artery, but with no other effect upon the tumour than the arrest of its growth for about a fortnight, after which time it rapidly increased and attained an enormous size. The patient could not be induced to submit to amputation. After death, which occurred four months after the ligature was applied, the tumour was found to consist of numerous cysts, many of which were filled with imperfectly coagulated blood, others with turbid serum, and in some parts masses of encephaloid carcinoma were seen.

II. GENERAL SURGICAL THERAPEUTICS.

I. TENOTOMY.

(*a.*) *In the Treatment of Deformities and Anchylosis.*—Mr. Tamplin,* in his valuable course of lectures on the treatment of

* *London Medical Gazette*, September, 1844.

deformities, strongly inculcates the important principle, originally maintained by Delpech, of allowing the divided tendon to unite before the process of extension is commenced, since its elongation is not to be attained by separation of its disunited extremities, but by the gradual extension of a newly organized material, by which they have been united. After three or four days have elapsed, the limb, being first carefully bandaged, may be placed in the extending apparatus, and the process of extension gently and gradually conducted. After the natural form of the limb has been restored, Mr. Tamplin allows the patient to exercise it, but not without the use of some mechanical support, which must be continued as long as any tendency to contraction exists, a period frequently protracted for many weeks or months.

When paralysis of one or more muscles exists, Mr. Tamplin states, that their atrophied condition remains after the deformity is removed, and that the patient must rest satisfied with the free motion of the joint, and artificial support: but when contraction has existed without co-existing paralysis, the limb will to a great extent recover its natural size, from the redevelopement of all the muscles by exercise, after all impediments to the motion of the joints have been removed

Dr. Little,* in a valuable treatise lately published, divides the surgical and mechanical treatment of *anchylosis* into three stages, namely, the operation of tenotomy; the reduction of the anchylosis; and the period employed in restoring freedom of motion, by passive and active exercises, frictions, manipulations, and baths. He considers tenotomy inadmissible before the complete cessation of the primary articular disease, and would defer the operation until at least three or four years have elapsed since the active disease subsided.

The work of Dr. Little contains engravings of apparatus adapted to the treatment of the different articulations when affected with anchylosis.

(*b.*) *In the Treatment of Fractures and Dislocations.*—Subcutaneous division of the tendo Achillis has been practised†

* On "Anchylosis, or Stiff Joint," &c., by G. Little, M.D.

† *Lancet*, March 23, 1844; and *Provincial Medical and Surgical Journal*, November 27, 1844,

in the treatment of fractures of the leg and dislocations of the ankle, by Dr. Halpin, of Dublin, and Sir John Fife, and by MM. Berard, Laugier, and La Vacherie. My friend, Mr. Turner, has recommended this operation to facilitate our attempts to reduce dislocations of the astragalus. I have at present a patient in the hospital who had sustained a severe injury of the ankle, the lower extremities of the tibia and fibula being fractured, and the foot sub-luxated backwards. The parts were readily restored to their natural position; but as soon as extension was discontinued they were again displaced. The painful and swollen state of the integuments precluded the employment of any mechanical support. After division of the tendo Achillis, the limb was laid on its fibular side upon a pillow; no further tendency to displacement existed, and the patient states that she has been perfectly easy since the operation, which was performed three weeks ago.

II. AMPUTATION.

(*a.*) *At the Hip-Joint.*—Mr. Cox* has successfully removed a diseased femoral stump by amputation at the hip-joint; and the same operation has been performed, by Dr. Handyside,† on a boy, aged thirteen years, affected with osteo-sarcoma of the shaft of the femur. Six weeks after the operation the patient left the hospital, but died after the lapse of four months and a half, carcinoma having become developed in the orbit, abdomen, and stump. Mr. Cox employed the horse-shoe tourniquet of Dr. Signorini, by which the artery was effectually compressed.

(*b.*) *Through the Condyles of the Femur.*—Mr. Syme‡ has recommended amputation by sawing through the condyles of the femur, in preference to the usual operation of division of the shaft of this bone, in cases where it is practicable. He considers that the section of the bone through its cancellous structure, is a less dangerous proceeding, and less liable to be followed by exfoliation, than when the medullary cavity is opened, and the dense structure of the shaft is exposed to the action of the saw.

* *Lancet*, February 15, 1845.

† *London and Edinburgh Journal of Medical Science*, April, 1845.

‡ *Ibid*, January, 1845.

Mr. Syme has adopted this proceeding in two cases with a very favourable result. In the first, having applied a tourniquet, so as to compress the femoral artery where it enters the popliteal space, he made an incision across the knee, on a line with the upper edge of the patella; then pushing the knife from one side to the other under the joint, he cut a flap from the calf of the leg, and finally sawed through the condyles of the thigh bone, so as to remove the whole articulating surface, which was ulcerated and carious. On bringing the edges of the wound together, the flaps were found to be rather deficient in length; he therefore, in his second operation, made an anterior semilunar incision, on a line with the lower edge of the patella, and had the integuments retracted before cutting into the joint above this bone. In other respects the operation was conducted as in the former case. Mr. Syme remarks that the posterior flap must be made very long, even to the full extent of the fleshy part of the gastrocnemii muscles, care being taken, however, to avoid preserving more than a moderate portion in regard to thickness.

Mr. Fergusson* lately adopted this mode of operating in a case which has terminated favourably.

(*c.*) *At the Ankle.*—The operation of amputation at the ankle, proposed or revived by Mr. Syme,† has been performed by this gentleman, and by Mr. Lyon, of Glasgow, Dr. Paul, of Elgin, and other surgeons. The following is the mode of operating adopted by Mr. Syme:—

The instrument employed is a large bistoury, or small amputating knife with a blade about four inches long. No tourniquet is required, as an assistant has complete command of the vessels by grasping the ankle. The incisions across the instep and sole of the foot should be curved, with the convexity forwards, and exactly opposite each other. A line drawn round the foot, midway between the head of the fifth metatarsal bone and the malleolus externus, will show their extent anteriorly, and they should meet a little way further back, opposite the malleolar projections of the tibia and fibula. Care should be taken to avoid cutting the posterior tibial artery before it divides into the plantar branches,

* *Lancet*, July 19, 1845.

† *London and Edinburgh Journal of Medical Science*, August, 1844.

otherwise partial sloughing of the inferior flap may occur. If the ankle-joint is sound, the malleolar processes should be removed by the bone-scissors; but if the articulating surfaces of the tibia and fibula are diseased, a thin slice of these bones should be sawn off.

Mr. Syme states, in August, 1844, that the operation had been performed in fourteen cases,—eight in his own practice, and six in that of others,—without one fatal result. In May, 1845, Mr. Syme has reported three other cases, in which he had operated with the same success.

(*d.*) *In Carcinomatous Affections of Bone.*—In a lecture lately delivered at St. George's Hospital, Sir Benjamin Brodie* makes the following observations:—

"If there be fungus hæmatodes of the tibia, no surgeon of sense would think of performing amputation, except above the knee, even if he did it there. In order that an operation for malignant disease may be successful, you must remove the whole of the organ in which it is situated, otherwise there is no chance of permanent good."

We have here an important principle of practice laid down, which most surgeons will feel it their duty to act upon, when they are induced to amputate for carcinomatous disease, affecting any of the bones within the range of amputation, except the femur. It is, however, a question, which future experience can alone determine, whether cases of malignant disease of the lower part of the femur ought not to form an exception to the general rule; or, in other words, whether the additional security derived from removing the entire femur, is not more than counterbalanced by the greater risk which attends amputation when performed at the hip-joint. In all such cases, however, if the operation at the hip-joint is rejected, the section of the bone should be made at the trochanters, so as to be fairly situated above the medullary cavity. Two cases have been reported by Mr. Frogley,† one of which has an important bearing upon this question. The disease in each was an enormous fungoid tumour of the lower part of the femur. Amputation was performed by section of this bone. At the time of the report,

* *Lancet*, December 16, 1843.

† *Medico-Chirurgical Transactions*, vol. xxvi.

both patients were in good health; one, after the lapse of seven months; the other, after nine years.

The case in which Dr. Handyside amputated at the hip-joint for medullary sarcoma, has already been noticed.

III. EXCISION OF JOINTS.

(*a.*) *Of the Head of the Femur.*—Dr. Bonino* has recorded two cases, in addition to the ten previously collected by him, in which excision of the head of the femur had been performed. Of the twelve cases, five succeeded perfectly, a result more favourable than would be likely to occur from amputation at the hip-joint; and if those cases are put out of the question in which the operation ought never to have been performed, the result of this operation will contrast still more favourably with that of amputation. The cases most appropriate for this operation are compound dislocations of the femur with protrusion of the head of the bone, and gunshot wounds involving the upper part of the bone. The operation has, on several occasions, been performed for caries; but it can seldom be justifiable in this affection, since the acetabulum generally partakes of the disease. The following case, however, which occurred in the practice of Mr. Fergusson, shows that there may be some forms of disease of the hip-joint in which this operation ought not to be rejected:—

Mr. Fergusson† lately removed the head, neck, and trochanters of the femur of a boy, aged fourteen years, who had suffered fifteen months from hip-disease, and was in the last stage of hectic. The affected limb was much shortened and distorted. There was no indication of disease of the bones of the pelvis, and the head of the femur seemed to be the principal cause of suffering, and could be felt by the finger passed through a large sinus. A longitudinal incision was made over the head and neck of the bone, and the shaft was cut through with a common saw. In two months the patient was able to walk about the ward on crutches, and the wound was nearly healed.

(*b.*) *Of the Elbow-Joint.*—My colleague, Mr. Smith,‡ has claimed for his predecessor, Mr. Josias Stansfeld, the priority in

* *Northern Journal of Medicine*, August, 1844.

† *Medical Times*, July 5, 1845.

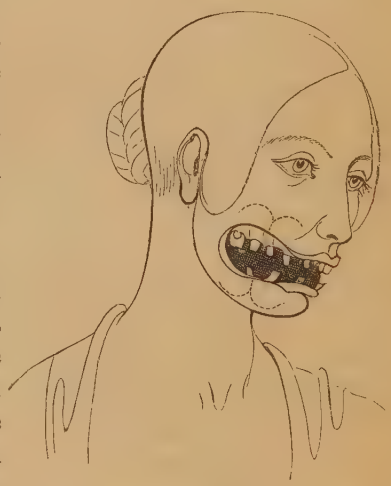
‡ *Braithwaite's Retrospect*, vol. ii.

performing excision of the elbow-joint. This operation was performed by Mr. Stansfeld, at the Leeds Infirmary, as early as the year 1817, at which institution it has since been an established operation. Mr. Smith was induced to notice this subject by the following statement of Mr. Syme:—"Previous to 1829 the operation of cutting out the elbow-joint had not been performed in Great Britain."

IV. PLASTIC OPERATIONS.

The department of plastic surgery has lately been greatly advanced by the labours of Von Ammon,* Serres, and Mütter, and by our own countrymen, Mr. James and Mr. Carden. I will briefly notice some of the more important proceedings in this department.

(*a.*) *For Contracted Mouth.*—The operation for the restoration of the mouth to its natural dimensions, after having undergone contraction from cicatrization or other causes, as practised by Dieffenbach, has been repeated by Von Ammon and Velpeau. It consists in a simple lateral incision on each side, and the reunion of the opposed borders of skin and mucous membrane. Where the thickness and induration of the intervening tissues require it, a wedge-shaped slice of the soft parts is removed, to facilitate the completion of the operation, by allowing of the more ready approximation of the skin and mucous membrane by suture.



(*b.*) *For Restoration of the Cheek.*—Dr. Mütter adopted the following treatment in a case of destruction of the cheek, from mercurial action, attended with rigidity of the masseter:—He first divided the masseter muscles from within, and in the course of a fortnight, by the aid of a screw-lever, succeeded in restoring the

* *British and Foreign Medical Review*, April, 1845.

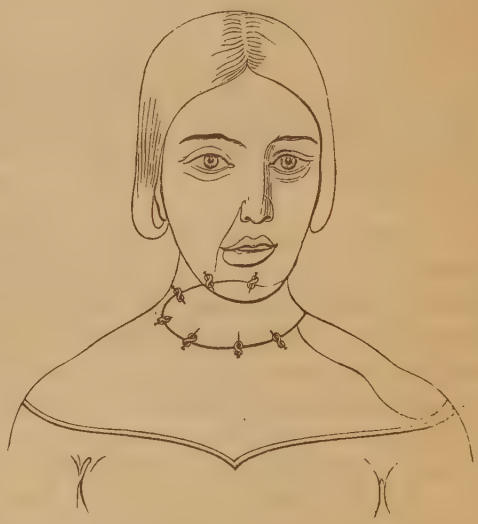
perfect motion of the jaw. He then detached the callous edges of the opening in the cheek, separated the adherent integuments from the bones, and tried to bring in contact the edges of the opening by drawing together the skin from all sides towards the centre. Failing in this attempt, he made other incisions,—namely, two concentric cuts above, which met in the middle of the upper margin, and two similar cuts below, meeting in the middle of the lower margin. Four flaps were thus formed, which were carefully detached from the subjacent parts, and were united without difficulty, in a line which indicated the long diameter of the opening.

(*c.*) *For the Removal of Deformities produced by Cicatrices of the Neck.*—Mr. Carden* has reported a most interesting case, in which he greatly mitigated the evils resulting from a contracted cicatrix of the neck by an auto-plastic operation. He has the merit, in this instance, of having preceded Dr. Mütter, to whose operations I shall soon have to refer, in adopting the auto-plastic principle, having practised it upon the subject of the present report on September 9th, 1839. His patient was a girl, aged fourteen years, who was greatly deformed by a burn which occurred seven years before. The movements of the head were much restricted, the mouth was permanently open, the tongue protruded, the lower incisors projected horizontally, and there was constant dribbling of saliva. A transverse incision was made throughout the entire extent of the cicatrix in front of the neck. The chin was then drawn upwards, and every tense band connected with the cicatrix was divided until the head was relaxed nearly into its natural

* *Transactions of the Provincial Medical and Surgical Association*, vol. xii.

position. A flap of skin, three inches long and two and a-half wide, was detached on each side from over the clavicle and chest. These were raised and united in front of the throat. The degree of improvement effected in this case, and tested by the lapse of four years, is highly gratifying.

Dr. Mütter* has been remarkably successful in his treatment of contracted cicatrices of the neck from burns. His mode of operating essentially consists in the transplanting of healthy skin into the position occupied by the cicatrix, and the division of the neighbouring muscles, when they are morbidly contracted. In an extreme case of this description, he began by making an incision, which commenced on the outside of the cicatrix, in *sound skin,* and passed across the throat, into *sound skin,* on the opposite side, passing as near the centre of the cicatrix as possible. It was, therefore, about three-quarters of an inch above the top of the sternum, the space being an inch and a half between the chin and the sternum. The sterno-mastoid was next entirely divided on one side, and partially on the other, after which the head could be raised to its proper elevation. He now detached a flap of *sound skin,* for the purpose of closing the chasm. To obtain this flap, he commenced at the terminal extremity of the first incision, and carrying the scalpel downwards and outwards over the deltoid muscle, dissected up an oval piece of integument, six inches and a half in length by six inches in breadth, leaving it attached at the upper part of the neck. The flap was next brought round, by making a half-turn of its pedicle, and, being placed in the gap it



* *British and Foreign Medical Review,* April, 1845.

was intended to fill, was carefully attached by several sutures to the edges of the wound. This bold operation was followed by the most satisfactory results, motion being restored to the head, the mouth closed, and the traction of the cheek and eye removed.

(*d.*) *For Fissure of the Palate.*—Dr. Mütter* has operated with great success for the relief of fissure of the palate. In twenty-nine operations on the hard and soft palate which he has performed, he has failed to relieve the patient but in two cases, and he has not met with dangerous symptoms in any instance. His mode of operating does not present any remarkable peculiarity. When the pared edges cannot be readily approximated, he approves of lateral incisions, as recommended by Dieffenbach, to relieve the tension.

In a valuable communication to the Royal Medico-Chirurgical Society, Mr. Fergusson† has related the result of a series of anatomical and physiological inquiries relative to cleft-palate. The following are the conclusions at which he has arrived:—

1. That the flaps are slightly drawn upwards and to the sides, when the levator palati contracts.

2. That when the levator palati and palato-pharyngeus act strongly together, the flaps are so forcibly drawn from the mesial gap, that they can scarcely be distinguished from the sides of the pharynx.

3. That the flaps are forced together, and the edges come into contact, when the superior constrictor muscle contracts during the act of deglutition.

4. That the circumflexus palati possesses but a feeble power over the flaps.

5. That the fibres of the palato-glossus were very imperfectly developed in the specimen in his possession.

The chief object of his paper is to communicate a novel plan of operating in staphyloraphy, founded on these investigations, and which he has put in practice with most satisfactory results in two cases. The principle of his new proposal is to divide those muscles of the palate which have the effect of drawing the flaps from each other, so that the stretched velum may be in a state of repose during the process of union. In other words, he proposes, as an

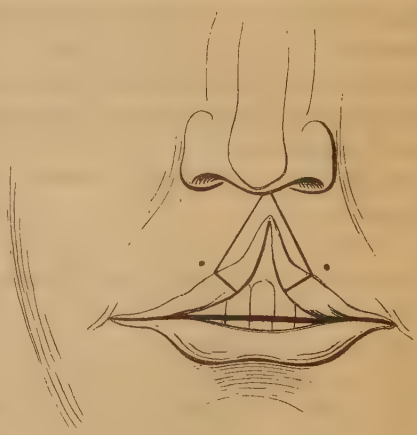
* *British and Foreign Medical Review*, April, 1845.

† *Ibid.*

accessory to the operation of staphyloraphy, the divisions of the levator palati and palato-pharyngeus muscles, and, if requisite, the palato-glossus.

(*e.*) *For Hare-lip.*—M. Malgaigne* has lately adopted a mode of operating for hare-lip, to prevent the formation of an unseemly fissure in the lip, which frequently detracts from the beauty of the operation. He commences the incision at the superior part of the lip, and performs it from above downwards, employing scissors in the same manner as in the ordinary operation, only when he has arrived as low as possible without detaching the cut piece, he stops. The same plan is followed on the other side of the labial fissure. There are then two small flaps, which are adherent to the lip by a pedicle. After having reunited, by the aid of pins, the two margins of the cleft in their whole extent, except towards their free borders, these flaps are brought from above downwards, and approximated face to face. The operator then, judging of the length which it will be proper to leave them, in order to prevent the furrow, shortens and finishes them as he thinks fit, preserving a piece varying in size according to the space which he has to fill. Union is afterwards effected by one or two fine interrupted sutures.

My colleague, Mr. Smith, has occasionally adopted a modification of M. Malgaigne's operation with the greatest success. He makes his incision from above downwards, in the ordinary way, as far as the red margin of the lip, through which part he cuts, by directing the incision towards the median line, so that the inferior part of the incision forms nearly a right angle with the upper portion. I have lately operated in this manner. By this modification of the operation for hare-lip, a



§ *Provincial Medical and Surgical Journal*, July 24, 1844.

much more symmetrical lip is formed than is usually observed after the ordinary mode of operating.

The *age* for performing the operation in cases of congenital hare-lip, has formed the subject of a communication to the Royal Academy of Medicine, by Professor Dubois,* who advocates an early operation, and has brought forward several cases in support of the proceeding. The patients were subjected to the operation at the following ages:—three on the second day after birth; one a few days after; one on the fifth; and one on the fifteenth. Four of the infants were allowed to take the breast; two were brought up by the hand; all the cases were successful. M. Dubois states, that if the child be sickly, and the hare-lip complicated with division of the bones, the operation ought to be deferred; but that when the child is strong and healthy, and the fissure only affects the lip, it ought to be performed early.

Professor Roux said, that it would be unfortunate if, on the authority of Professor Dubois' name, it should be concluded that the operation ought to be performed early in every case. The facts recorded by him are relative to simple uncomplicated hare-lip, and in this respect M. Roux coincided in a great measure with him, although he is always fearful of dangerous results consecutive to operations in very young children, the more so, as he has witnessed several which terminated fatally.

Mr. Liston† recommends that the operation be deferred until the first set of teeth have appeared. "When the features are enlarged somewhat," he observes, "you have more ground to work upon; you can then put the parts neatly together, and you can almost answer positively for the union taking place."

(*f.*) *Urethro-plasty.*—M. Jobert‡ has performed the following operation for the relief of urinary fistula, resulting from extreme sloughing of the perineum:—He first excised the edges of the wound situated in the scrotum and groin, united the parts by the interrupted suture, and when the cicatrix was sufficiently firm, he proceeded to the second stage of the operation, namely, the restoration of the urethra. To effect this he cut off, as before, the edges

* *Medical Times*, June 21, 1845.

† *Lancet*, August 17, 1844.

‡ *Medical Times*, December 14, 1844.

of the lost portion of the urethra, and dissected carefully a portion of the integuments from the right side of the scrotum; but as this was insufficient, he continued the incision upwards on the penis, and thus enough skin was obtained to cover the lost part, to which it was fixed by means of the interrupted suture; and, in order to prevent the too prompt union of the parts, under each ligature a bit of agaric was placed. A gum elastic catheter was then introduced into the bladder, and allowed to remain there until the union was complete. At the time of the report, three months had elapsed since the operation, and the flow of urine was as free as before the patient was ill.

III. SPECIAL SURGERY.

OF THE BONES.

Equilibrial Treatment of Fractures of the Thigh-bone.—Under the designation of equilibrial treatment, Dr. Mojsisovics,* of Vienna, has described the employment of a peculiar apparatus, which he has found of the greatest value in the treatment of fractured thighs. The patient is placed upon a firm bed, over which a frame-work is laid, consisting of four posts connected by horizontal bars, and resembling a four-post bed with strong posts and connecting transverse beams. The patient is laid flat on his back, whilst a strong band, passing from one side of the bed to the other, fixes the pelvis firmly on the bed. The thighs are then bent at right angles to the body, and placed in a vertical position, whilst the legs are bent at the knee to a right angle with the thigh, so as to be in the horizontal position. Two broad folds of linen are passed from the upper beams of the frame beneath the calves of the legs, to support them; paste-board splints, fitting accurately to the thighs and buttocks, keep them in position; whilst a weight, passed over a pulley and fastened to the foot of the broken limb, extends the limb to the level of the sound limb placed by its side. The patient, in short, lies on his back in bed, with his legs in the same relation to his body as when he is sitting in a chair, but now necessarily bent up in the air. Under the care of Dr. Mojsisovics all fractures of the thigh are thus successfully treated.

* *British and Foreign Medical Review*, October, 1843.

Ununited Fracture, treated by Seton, Acupuncture, and Excision.—Dr. Houston* has successfully employed the seton for promoting the union of a fracture of the radius and ulna, in a female, aged twenty-nine, who had sustained the injury ten months previously. During the fourth week of treatment the seton was gradually withdrawn, a few strings being removed at each dressing. As soon as the swelling had subsided, the arm was put up, immoveably, with starched bandages and paste-board.

Dr. Wiesel† procured consolidation of a fracture of the fore-arm, which was ununited, after the lapse of nine weeks, by introducing two needles, of sufficient length to traverse the false articulation of the ulna from side to side, and allowing them to remain inserted for the six following days; after which time they were withdrawn, because they had excited, by their presence, a considerable swelling of the part and severe pain. After fifteen days the false articulation of the radius was treated in the same manner. In six weeks afterwards consolidation was affected.

Sir John Fife‡ succeeded in procuring the union of a fracture of the humerus, after the lapse of seven months, by the excision of the ends of the bone. The wound was united by suture, and splints were applied. In five weeks the bone had united.

OF THE ARTICULATIONS.

Dislocation of the Sternal Extremity of the Clavicle.—A case of dislocation of the sternal extremity of the clavicle backwards, has been recorded by Mr. Spender.§ It occurred in the following manner:—A horse placed his fore-foot on the right clavicle of his rider, who had been thrown and laid on his back. By placing a wedge-shaped compress in the axilla, and forcibly drawing the humerus outwards and backwards, the clavicle was replaced, and by the use of bandages, was retained in its natural position.

Dislocation of the Humerus, with Fracture of its Neck.—Mr. R. W. Smith‖ exhibited to the Pathological Society of Dublin, an

* *Dublin Medical Press*, vol. xi., p. 277.

† *Gazette des Hôpitaux*, December 16, 1843.

‡ *Provincial Medical and Surgical Journal*, December 16, 1843.

§ *London Medical Gazette*, June 1844.

‖ *Dublin Journal of Medical Science*, vol. xxv., p. 523.

example of luxation of the head of the humerus, with fracture of its neck. The former was dislocated downwards into the axilla, and the latter was broken obliquely, about two inches below the head. The fragments had united, with considerable overlapping and consequent deformity, and a new socket had been formed for the head of the bone, beneath the coracoid process, upon the subscapular surface of the scapula. Mr. Smith stated, that in this injury, when there exists any displacement of the fragments, the limb is shortened; whereas in luxation without fracture it is lengthened. The accident is further distinguished by the displaced head of the bone remaining motionless when the shaft is rotated; the elbow may also, in general, be brought close to the side. This injury, he observed, is necessarily followed by permanent deformity, as no extending force could be made to act upon the luxated head of the bone.

A case, however, of partial dislocation of the humerus forwards, with fracture of its neck, has occurred in the practice of Mr. Houghton,* of Dudley, and is interesting from the circumstance of reduction of the displaced head of the humerus having been effected. The reduction was accomplished, nine days after the accident, in the following manner, as related by Mr. Houghton:—

"The patient was placed on a stool. I stood behind him, with my knee firmly fixed against the scapula, my foot resting on the stool. With a folded towel placed through the axilla, I made extension downwards and backwards, the towel, of course, pressing directly upon the bone. Mr. Roberts at the same time, from before, directed the application of the towel, and with his own hand thrust very powerfully in the direction of the extension which I was making; the head of the bone returned to its proper position in about five minutes. We both felt it distinctly, but no snap was heard."

Splints, rollers, and sling were afterwards applied. Had the dislocation been complete, Mr. Houghton fears that the same happy result would not have been obtained.

Dislocation of the Tendon of the Long Head of the Biceps.—Mr. Hancock† has directed the attention of the profession to an accident

* *Lancet*, September 28, 1844.

† *Provincial Medical and Surgical Journal*, November 13, 1844.

which has, no doubt, frequently been overlooked by the surgeon, namely, dislocation of the tendon of the long head of the biceps. The principal signs of this accident are, pain and tenderness in front of the joint, corresponding to the bicipital groove; acute pain in the course of the biceps when it is thrown into action, the pain being referred more particularly to its two extremities; the patient is unable to raise his hand to his head, or his arm beyond an acute angle with the body; the appearance of the shoulder is somewhat altered, the head of the humerus being drawn upwards, and more forwards than natural, lying close beneath the acromion, whilst the posterior and external part of the joint is somewhat flattened.

Mr. Hancock considers that this accident has frequently been mistaken for partial dislocation of the humerus upwards and forwards. One of its characteristics is, that when the head of the bone has been returned to its proper place, it quickly resumes its abnormal position. The chief diagnostic signs of this accident appear to be, great pain in the course and attachments of the biceps, and the undue approximation of the head of the humerus to the acromion. Mr. Hancock, however, admits that these signs are anything but satisfactory.

Dislocation of the Hip.—Dr. Clark,* of Southampton, succeeded in reducing a dislocation of the femur on the dorsum of the ilium, in the following manner, after having failed in his attempts at reduction in the ordinary method:—He flexed the knee to a right angle, and thereby raised the thigh to an angle of about forty-five degrees with the bed, perhaps nearly to a right angle with regard to the pelvis; by bringing the foot in contact with the other leg, whilst the knee was sustained in a perpendicular direction, the femur was rotated, and the trochanter major thrown outwards, the head alone then resting on the ilium behind the acetabulum, which cavity, with the axis of the femur through its head, neck, and shaft, were now nearly on the same plane. In this relative position of the parts, by throwing the limb outwards, the head of the bone started forwards to its natural situation, with no more force being employed than was necessary to abduct the limb.

Sub-luxation of the Semilunar Cartilages of the Knee.—Mr.

* *Provincial Medical and Surgical Journal*, December 9, 1843.

Sandham,* of Cork, adopts the following mode of reducing partial luxations of the semilunar cartilages of the knee-joint:—The patient being placed on his back, the thigh flexed on the pelvis, and a thick pad or the patient's arm placed under the knee-joint, the operator forcibly flexes the leg on the thigh, and, preserving the flexed position of the leg, turns it outwards, if the internal cartilage, and inwards, if the external cartilage be displaced; he then, whilst maintaining the turned position of the leg, gradually, and without violence, extends the limb, and the cartilage resumes its natural position.

Mr. Sandham states, that we may know which cartilage is displaced, by the severe pain produced on turning the leg outwards, if it be the external, or on turning it inwards, if it be the internal.

Dislocations of the Astragalus.—Our associate, Mr. Turner,† of Manchester, has rendered an essential service to surgery by the publication of his valuable observations on "Dislocations of the Astragalus." In his treatise on this subject, and in a letter subsequently published, he limits the designation of "Dislocations of the Astragalus" to those accidents in which *all* the articular surfaces of the bone are in some degree displaced. It is important to bear this definition in mind, as many previous writers have described under the same name, certain accidents in which the astragalus retains its normal attachment by one or more of its articular surfaces. It is unnecessary for me to point out how widely such accidents differ from *isolated* dislocations of the astragalus, the subject of Mr. Turner's treatise.

Mr. Turner divides these dislocations into partial and complete. In the partial dislocations, a portion of the astragalus, involving its entire vertical thickness, remains interposed between the tibia and calcaneum, whereby shortening of the leg is prevented; but when the astragalus is completely displaced, the tibia and calcaneum are approximated, and shortening, as Mr. Turner has pointed out, is the invariable result. When the luxation is complete, the bone is generally detached from all its vascular connexions, and, in consequence thereof, frequently loses its vitality; but it is a remarkable fact, that death of the bone is not an invariable result.

* *Dublin Medical Press*, August 21, 1844.

† *Transactions of the Provincial Medical and Surgical Association*, vol. xi.

In several cases of dislocation backwards, collected by Mr. Turner, the bone, supposed to have been completely displaced, was allowed to remain in its abnormal locality, and having there formed new vascular connexions, retained its vitality.

The astragalus may be displaced in various directions, but the anterior dislocations are by far the most frequent. Of forty-five cases, the displacement occurred at the anterior aspect of the joint, with more or less obliquity, in twenty-six; at the tibial side, in six; at the fibular side, in seven; and posteriorly, in six.

The astragalus, when displaced, had been observed in one instance by Dupuytren to be rotated upon one of its axes. Much additional evidence of the occasional rotation of the bone is adduced by Mr. Turner. In reference to this circumstance, he names those dislocations *indirect* in which the astragalus has undergone rotation, and those *direct* in which no such rotation has occurred.

Dislocations of the astragalus are frequently complicated with fracture of the calcaneum, or of the malleolar extremity of the tibia or fibula. These fractures frequently exert a favourable influence upon the reducibility of the dislocation.

These dislocations are frequently complicated with a communicating external wound, the cases of *simple* and of *compound* dislocation being nearly equal.

The *reducibility* of dislocations of the astragalus is a subject deserving serious consideration. Mr. Turner is of opinion, that, in *partial* dislocations, there is a reasonable hope that reduction may be accomplished, since the astragalus retains in part its position between the tibia and calcaneum, and the main obstacle to success, namely, the forcible traction of the one bone to the other, and the consequent obliteration of the space between them, does not occur. In *complete* dislocations, he considers reduction as next to impossible.

On carefully reviewing the forty-five cases which Mr. Turner has recorded, I do not find that the prospect of reducing these dislocations, whether partial or complete, is at all encouraging, since there are only two, possibly uncomplicated with fracture—one a partial dislocation forwards, (case 16,) and the other a complete dislocation forwards, (case 6,)—in which reduction was accomplished; and as the details of these cases are scanty, and no allusion is made to the non-existence of fracture, it is not improbable that fracture may in these instances have co-existed

with dislocation. When, however, displacement is complicated with fracture communicating with the astragalar articulations, reduction may be attempted with a strong probability of success. Evidence of such success is afforded by the cases collected by Mr. Turner.

As an auxiliary to reduction, he advocates the sub-cutaneous division of the tendo Achillis; but he doubts the propriety of dividing the tendons of the tibial and peroneal muscles, as they would become retracted within their sheaths, so as to lose all attachment with the bones of the foot.

In the following summary, I have endeavoured to embody as briefly as possible the views of Mr. Turner, relative to the treatment of the different varieties of dislocation of the astragalus:—

In *simple partial* dislocation, reduction failing, the case should be left to the resources of nature. (See pp. 453, 465, 467.)

In *compound partial* dislocation, reduction failing, partial or complete excision of the bone should be practised. (See p. 467.)

In *simple direct complete* dislocation, moderate attempts at reduction failing, the bone should be left, for some time at least, to the resources of nature. If the integuments covering the displaced bone subsequently inflame, and ulceration or sloughing be threatened, Mr. Turner, in his treatise, recommends that the astragalus be exposed by incision, and then left to be subsequently extricated by the efforts of nature. On this point, however, Mr. Turner's opinion has undergone some change. In a letter which I have lately received from him, he informs me that he is *now* of opinion that immediate removal of the bone is to be preferred. In dislocation backwards, the bone has, on several occasions, permanently remained in its new locality, without producing serious inconvenience. (See pp. 465, 467, 474.)

In *simple indirect complete* dislocation, Mr. Turner, anticipating as a matter of certainty that the bone would die and require dislodgment, would at once make an incision over it, and leave it to be subsequently detached. (See p. 475.)

In *compound complete* dislocation, Mr. Turner deprecates all attempts at reduction, and would immediately remove the astragalus. (See p. 475.)

In concluding this summary of Mr. Turner's views, I have much pleasure in stating that he will, ere long, redeem his pledge

of republishing his treatise, and will thereby submit to the profession the great mass of additional information which he has obtained, as well as his opinions matured by further experience and reflection.

I cannot, however, take leave of the subject without offering, with the utmost deference, the following observations:—

It has occurred to me that Mr. Turner has over-rated the relative frequency of *complete* dislocations. Of the forty-five cases collected by him, forty are stated to be complete, and five, partial dislocations of the astragalus. But as the point of diagnosis between these two classes of accidents—namely, the shortening of the leg in complete dislocations—originated with Mr. Turner, and as the records of previously edited cases are silent on this point, I do not think that there is sufficient collateral evidence to enable us to decide, that in all these forty cases the astragalus was completely dislocated. Indeed, I strongly suspect that many of them should be ranked as partial dislocations.

As an auxiliary measure, to be used alone or in conjunction with tenotomy, I would strongly recommend the sub-cutaneous division of the ligaments connecting the tibia or the fibula to the calcaneum, and thereby to place the astragalus, in point of reducibility, somewhat in the condition in which it exists, when there is fracture of the malleolar extremity of the tibia or of the fibula. This mode of treatment would be applicable to an extensive range of cases of dislocation of the astragalus.

Mr. Turner has expressed his opinion, that in a majority of cases there is an accompanying fracture of this bone. In this opinion I fully concur, and so strongly have I been impressed with it, that I have repeatedly questioned, whether the so called dislocations of the astragalus ought not rather to be regarded as fractures of this bone, with displacement of one or more of the fragments.

Dislocation of the Scaphoid Bone and Calcaneum from the Astragalus.—Mr. Hancock,* has directed the attention of the Royal Medico-Chirurgical Society to that form of injury of the foot, in which the scaphoid bone and calcaneum are detached from the astragalus, whilst the latter bone retains its connexion with the

* *Dublin Medical Press*, vol. xi., p. 268.

tibia and fibula. In a case which he has related, this accident was accompanied with fracture of the fibula, about three inches above the joint. The dislocation was reduced, but, in three days afterwards, the portion of integument which had been stretched over the astragalus sloughed, the anterior portion of this bone was exposed, and the internal calcaneo-scaphoid ligament came away. The astragalus gradually became twisted round upon the calcaneum, until a large portion of its head protruded, which was removed by the saw. The wound granulated and healed, and, ten months subsequently, the patient walked as well as before the accident.

Dislocation of the Metatarsus from the Tarsus.—A case of dislocation of the metatarsus inwards from the tarsus has been related by Mr. Kirk,* of Glasgow. The metatarsus formed a projection to the extent of an inch on the inside of the foot, and left a corresponding depression on the outside. The reduction was easily accomplished.

Before leaving the subject of dislocations, I must direct the attention of the Association to the lectures of Mr. Hancock,† which are replete with valuable information on this important subject.

OF THE ARTERIES.

Diagnosis of Aneurism.—The events of the last two years have no tendency to inspire us with increased confidence in our diagnosis of aneurism. Besides the pulsating tumours of bone already mentioned, several instances have occurred, in which other tumours have been, like them, mistaken for aneurism.

The carotid artery has been tied by Dr. Kerr,‡ in a case of solid tumour of the neck, unconnected with the large vessels. At the Jervis Street Hospital, Dublin, the carotid was lately tied in a case of carcinomatous tumour of the neck; and Dr. Engelhardt § has tied the femoral for a fibro-cystic tumour of the ham, supposed to be popliteal aneurism.

* *London Medical Gazette*, June, 1844.

† *Provincial Medical and Surgical Journal*, 1844, 1845.

‡ *Edinburgh Medical and Surgical Journal*, vol. lxi., 119.

§ *British and Foreign Medical Review*, October, 1843.

Such errors have generally arisen from an undue reliance on certain symptoms, supposed to be pathgnomonic, of this disease; I allude more especially to a real or apparent *diastolic* impulse felt in all parts of the tumour, and to the pulsating tumour undergoing a diminution of size, when itself, or the artery at its cardiac side, is compressed.

These errors are most liable to occur in the erectile forms of malignant tumours, and in cysts containing fluid, whose walls are intimately connected with a large artery. I will bring forward a few examples, to show that the signs to which I have alluded may exist singly or conjointly in diseases not aneurismal.

Dupuytren* has described a malignant tumour developed from the bones of the foot, which pulsated like an aneurism throughout its whole extent, with a distinct novement of expansion in every direction.

The pulsating tumour of the femur lately under the care of M. Nélaton,† was diminished in size by compressing the femoral artery.

In Dr. Engelhardt's case of popliteal tumour, for which he tied the femoral artery, there were several cysts on the surface, containing fluid, between two of which the artery passed, and communicated such an impulse to their fluid contents, as to give the sensation of the whole tumour pulsating.

The peculiar impulse given by the heart, or a large artery, to a mass of fluid external to their walls, has been well illustrated by Dr. M'Donnell,‡ in his excellent essay on empyema. This gentleman has related several cases of *pulsating* empyema. In one, there was a tumour below the left nipple, as large as an orange, which had a "distinct diastolic pulsation," evidently of an "expanding" character, and felt equally strong in every part of the tumour. In a second case, there was a strong diastolic pulsation; and in a third, a distinct perceptible and diastolic impulse.

In a case, under my own care, of large serous cyst of the neck, extending downwards behind the clavicle to the vicinity of the large vessels, there was such a strong and apparently distensile

* *Leçons Orales*, tome iii.

† *Lancet*, April 12, 1845.

‡ *Dublin Journal of Medical Science*, vol. xxv., p. 1.

impulse perceptible in all parts of the tumour, as to induce myself and several other surgeons, for a considerable time, to regard it as aneurism. In this case, the hands applied to the sides of the tumour were forcibly separated at each pulsation; and, by compression, the tumour was diminished in size, (undoubtedly from a portion of its contents being forced below the clavicle towards the chest,) and when the pressure was discontinued, the tumour gradually resumed, by pulsatile stages, its original size. Hypertrophy of the left ventricle, and dilatation of the abdominal aorta, tended still further to obscure the case. After the tumour had been reduced in size, its true character became apparent.

The exploratory puncture, hitherto regarded as a test of aneurism, can no longer be received as such, since I have shown that a malignant cysto-vascular tumour of the femur, on two occasions, after an exploratory puncture, gave issue to a pulsatile column of florid blood, which was projected to the height of several inches.

I feel myself open to the censure, that in these observations nothing has been advanced that will assist our diagnosis of aneurism. They may, however, teach us a lesson of caution.

Hemiplegia after Ligature of the Carotid.—The operation of ligature of the carotid has, in two instances, been followed by hemiplegia. M. Sedillot* tied the right common carotid for a wound of one of its branches. His patient became paralysed on the left side of the body, and died on the ninth day after the operation. The examination after death is said to have shown that the paralytic symptoms had resulted from the right side of the brain having been deprived of its due supply of blood. Considering the free anastomosis of the cerebral arteries, it is difficult to imagine how the obstruction of one of the carotids could have exerted such a partial influence upon the brain.

Dr. Fairfax† tied the left common carotid with a similar result. In about an hour after the operation it was observed that the right limbs were paralysed. Death occurred on the fifth day. It is to be regretted that the body had not been examined after death. I strongly suspect that in these cases the jugular vein, and its tributaries within the cranium, had been obstructed with fibrinous coagula.

* *Dublin Journal of Medical Science*, September, 1843.

† *Ibid.*, January, 1844.

Aneurism of the Arteria Innominata—Distal Ligature of the Carotid.—The distal operation of ligature of the carotid has been performed by Dr. Hutton,* of Dublin, in a case of aneurism of the arteria innominata. The tumour collapsed on the application of the ligature, and on the second day had still more diminished in size. The case proceeded favourably until the twenty-second day, when hæmorrhage from the wound occurred. On the forty-second day the tumour was evidently increasing in size; on the seventy-sixth the patient died. It was ascertained that there had not been any attempt at union in the artery. The coats of the carotid were atheromatous, and the tumour contained purulent matter and grumous blood.

Ligature of the Commom Iliac Artery.—A ligature has been successfully applied to the common iliac artery, for the cure of aneurism of the external iliac, by Mr. Richard Hey,† of York. This operation, so creditable to modern surgery, I had the satisfaction of witnessing. At the time of Mr. Hey's operation the common iliac had been tied nine times, and in five of the cases the patient had recovered.

I would here notice the situation of the incision adopted by Mr. Hey, as a subject deserving especial attention. The incision was commenced at a point, situated two inches and three-quarters above the umbilicus, and three inches distant from the median line. From this point it was prolonged downwards for about six inches, in a moderately curved direction, to the base of the tumour. The lower extremity of the incision was afterwards prolonged in an angular direction outwards, to the extent of an inch and a half, on account of the projection of the tumour. After the abdominal muscles and transversalis fascia had been divided, the loose parietal portion of the peritoneum came into view, and, by laceration of the sub-peritoneal tissue, was readily pushed along with its contents towards the median line; when, from the situation of the incision being almost directly over the iliac artery, this vessel was brought into view and tied without any material difficulty. I have repeatedly satisfied myself on the dead subject, of the facilities afforded by an incision situated midway

* *Dublin Journal of Medical Science*, vol. xxv. p. 499.

† *Transactions of the Royal Medico-Chirurgical Society*, vol. xxvii.

between the lateral and median lines of the body, for reaching the aorta, the common iliac artery, the internal iliac, and the upper part of the external iliac. In this situation the peritoneal bag is readily detached from the transversalis fascia, and the finger may be insinuated without difficulty through the sub-peritoneal tissue, until it is placed on any of these vessels which may be the object of our search.

Since Mr. Hey's operation was performed, two cases have been reported in which Dr. Garviso* has tied the common iliac artery. The result of one of these operations was successful, although a mode of operating was adopted which I trust will never again be repeated. I allude to the double incision of the peritoneum, by which means Dr. Garviso reached the iliac artery.

Aneurism treated by Compression.—There is, perhaps, no subject within the range of my Address, which is more important, as indicating a great advance in the science of surgery, than the treatment of aneurism by compression. Although compression of the artery on the cardiac side of the tumour had been successfully employed by Guattani,† yet, as the principle upon which the treatment should be conducted was not understood, failures occurred, and the practice fell into disuse, until it has been recently revived under more favourable auspices.

Early in the present year, Dr. Bellingham ‡ stated to the Surgical Society of Ireland, that twelve cases of aneurism, namely, nine of popliteal and three of femoral, had been successfully treated by compression. The first of these occurred to Dr. Hutton, in November, 1842; the subsequent cases were treated by Dr. Hutton, Dr. Cusack, Dr. Bellingham, Mr. Liston, Dr. Harrison, Dr. Kirby, Dr. Allan, Mr. Greatrex, and Dr. Porter.

It is remarked by Dr. Bellingham, that, after the cure, the femoral artery could be traced nearly as far as the sac of the aneurism; hence it is evident that the artery is not obliterated at the point compressed.

He also states, that enlargement of the articular arteries about the knee nearly coincided with the cessation of pulsation in the

* *London and Edinburgh Journal of Medical Science*, September, 1844.

† *Observations on Aneurism*, by J. E. Erichsen, p. 285.

‡ *Dublin Medical Press*, March 19, 1845.

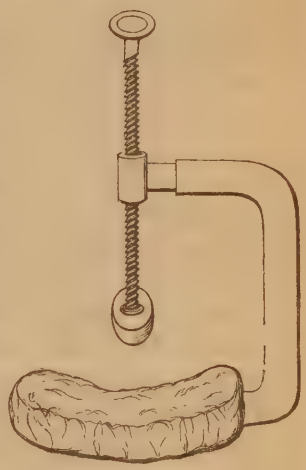
tumour. The increased size of the collateral vessels may therefore be regarded as an evidence of the filling up of the aneurismal sac, and as a favourable sign.

Such an amount of pressure as will cause inflammation and adhesion of the opposed surfaces of the artery, is not necessary. Dr. Bellingham has shown that the compression should not be carried so far as completely to intercept the circulation in the artery at the point compressed; since the consolidation of the aneurism will be more certainly and quickly brought about, and with less inconvenience to the patient, by allowing a feeble current of blood to pass through the sac of the aneurism.

The most recent improvement in this department consists in the adoption of two compressing instruments along the course of the artery, whereby the point of pressure may be alternated, and the evils of continuous pressure avoided.

In several of the cases, the treatment was less tedious than the ordinary operation by ligature.

Through the courtesy of Dr. Bellingham, I am enabled to show a drawing of the compressor § which he employs. It is a modification of a carpenter's clamp, and was invented by a patient under Dr. Harrison's care. It consists of an arc of steel, covered with leather, at one extremity of which is an oblong padded splint; the other extremity terminates in a nut, containing a quick screw, to which a pad, similar to that of a tourniquet, is attached. One of these instruments may be applied to the artery as it passes over the pubes; the other, of similar construction, but smaller size, is applied lower on the thigh, and may be also used for compressing the brachial artery. Dr. Bellingham informs me, that so highly satisfactory has been the result of compression in Dublin, that no surgeon of that city would, in the present day, perform the operation of applying a ligature to the femoral artery for popliteal



* Made by Mr. Millikin, Grafton Street, Dublin.

aneurism. He also adds, that since he adopted the plan of using two compressors, time is saved, and the patient is put to but little inconvenience during the treatment.

In the absence of the usual compressing instrument, Dr. Bellingham, on one occasion, employed the following mode of making pressure upon the femoral artery, which the patient preferred to the use of the compressor:—It consisted in the application of a weight of seven pounds, placed upon a pad previously laid over the artery at the groin, the patient lying upon the back, with the legs drawn up. This was found quite sufficient to stop the pulsation in the aneurism below. The pad was so placed that the weight merely required the patient's hand to be laid upon it to retain it in its place. Dr. Bellingham tells me that it gave the patient no pain at all, and that he was enabled to change his position without inconvenience.

In regard to the surgical literature of the arteries, I have to mention, with great satisfaction, the publication of Mr. Erichsen's valuable "Observations on Aneurism," under the sanction of the Sydenham Society; and the completion of Mr. Quain's splendid work on "The Arteries," abounding in information of the highest practical importance.

OF THE HEAD.

Excision of the Upper Jaw.—The superior maxillary bone has been extirpated by Mr. Williams,* Mr. Grant,† M. Lisfranc,‡ Mr. Mussey,§ and twice at the Leeds Infirmary, by my friend, Mr. Smith.||

I have much pleasure in stating that the two patients whom I presented to the Association two years ago after having recovered from this operation, continue to enjoy perfect health.

Dr. Heyfelder,¶ of Erlangen, has successfully extirpated both the superior maxillary bones of a man, aged twenty-five years. The disease under which he laboured was a tumour, developed

* *Guy's Hospital Reports*, October, 1843.
† *Lancet*, November 4, 1843.
‡ *Medical Times*, October 19, 1844.
§ *Ibid.*, December 7, 1844.
|| *Provincial Medical Journal*, November 18, 1843.
¶ *Encyclographie des Sciences Médicales*, March, 1845.

from the palate, which, rapidly increasing in size, distorted the two upper maxillary bones, pushed the nose upwards, and rendered deglutition, respiration, and speech difficult. The patient rapidly recovered.

In the operation of excision of the superior maxillary bone, M. Velpeau* adopts a single incision, extending from the angle of the mouth obliquely upwards to the temporal region. He has, on several occasions, found this single incision amply sufficient for exposing the parts to be removed. Mr. O'Shaughnessy† also adopts the single line of incision.

Excision of the whole Lower Jaw.—Dr. Signorini,‡ of Padua, has removed the entire lower jaw at its articulations, on account of an osteo-sarcomatous affection. The patient speedily recovered, and was presented a few months afterwards to the Italian Scientific Association. The power of swallowing, and the faculty of speech, were preserved.

Immobility of the Lower Jaw successfully treated.—Two cases have been related by Dr. Brainard,§ in which he succeeded in restoring a considerable degree of mobility to the lower jaw, after it had been lost from cicatrization consequent upon severe ptyalism.

The cicatrix on the right side was separated from the gums above and below, and the cheek detached freely from its adhesions; the firm ligament which extended between the jaws was then divided. The same process was repeated, to the requisite extent, on the left side. Strong efforts were now made to separate the jaws with the hands, but without success. Recourse was then had to a screw-lever, by the aid of which the jaw was without difficulty depressed.

The instrument employed for this purpose, was constructed by adapting two small plates of steel to a common tourniquet divested of its band. Small blocks of wood were placed between the incisor teeth, in such a manner as to keep the mouth fully open during the whole process of cicatrization, being only moved to allow the

* *Bulletin Générale de Thérapeutique*, September, 1844.

† *British and Foreign Medical Review*, July, 1845.

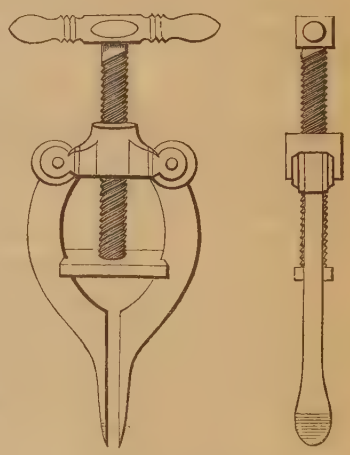
‡ *Edinburgh Medical and Surgical Journal*, vol. lxi., p. 235.

§ *American Journal of the Medical Sciences*, October, 1843.

patient to take food. The use of these blocks was afterwards gradually discontinued. After the lapse of twenty months there was a space of three-quarters of an inch between the incisor teeth, the speech was restored, the patient could take solid food, and the deformity was entirely removed. The second case was equally successful.

It is of the highest importance, in reference to this operation, to bear in mind the principle upon which its success depends, and which has been judiciously urged by Dr. Brainard. He regards the operation merely as a modification of the auto-plastic principle. When the mouth is pressed open, the cheek is made to supply the place of the lost substance; in this new situation it adheres to the gums, leaving a portion of its substance free between the gums and the upper and lower jaws.

My friend, Mr. Thomas,* of Sheffield, has successfully adopted a similar plan of treatment in a case of immobility of the jaw, consequent upon mercurial phagedena. Mr. Thomas judiciously insists upon the necessity, in similar cases, of keeping up mechanical extension, not only during the process of cicatrization, but for months afterwards.



I have lately found a screw-lever, represented in the drawing which I now exhibit, of great use in the treatment of anchylosis of the jaw. The instrument was suggested by the tourniquet apparatus employed by Dr. Brainard, and was constructed for me by Mr. Gay, of Leeds.

Excision of the Tongue—Section of the Lower Jaw.—Professor Sedillot,† of Strasbourg, has resorted to section of the lower jaw, to facilitate the operation of excision of the tongue. His patient laboured under cancer of the tongue, the whole of the left half of this

* *Provincial Medical and Surgical Journal*, March 26, 1845.

† *Dublin Medical Press*, vol. xi., p. 267.

organ, as far back as the epiglottis, being deeply implicated in the disease. The first incisor tooth on the left side being removed, a vertical incision was carried a little to the left of the mesial line, through the entire thickness of the lower lip, and the integuments of the neck, as low down as the hyoid bone. A straight bistoury was now passed behind the corresponding part of the lower jaw, which bone was then divided with a saw The ends of the bone being now separated by an assistant, the soft parts were detached from the left portion of the jaw-bone, as far back as the velum of the palate; the tongue was divided longitudinally in the middle line, and the removal of its left half completed, by carrying the knife transversely across its base, in front of the epiglottis.

Ranula.—M. Pètrequin* dissents from the prevalent opinion, that ranula is produced by a dilatation of the ducts of Wharton, on the following grounds:—the symptoms of ranula not being similar to those of retention of saliva in the parotid gland; the liquid it contains not resembling saliva, but the glairy contents of some cysts; the most successful treatment of it being that which best succeeds in cysts, namely, excision or obliteration of the cavity by irritant injections or by setons; incisions in ranula having a tendency to close, whereas wounds of excretory canals tend to become fistulous; the dissections of M. Breschet having shown that the tumours, named ranula, are cysts occupying the submucous cellular tissue.

M. Jobert de Lamballe† has successfully treated two cases of ranula, by the following plastic operation:—The tongue being raised and pushed backwards, an assistant seized one side of the tumour with a forceps, and the surgeon the opposite side, so as to steady it thoroughly. A portion of the mucous membrane, elliptical in form, about three lines broad, and from six to eight lines long, was then removed from the anterior surface of the tumour, without opening the proper cyst. The cyst was next opened in its whole extent, and the contents discharged. The edges of the cyst were then turned outwards, and one stitch was passed on each side, through the edge of the cyst and that of the mucous membrane, so as to confine them together.

* *British and Foreign Medical Review*, July, 1840.

† *Annales de la Chirurgie*, September, 1843.

OF THE SPINE.

Fracture of the Spine treated by Extension.—Mr. Crowfoot,* of Beccles, has employed extension in the treatment of fracture of the spine, with the most satisfactory result. The injury was inflicted upon the lower dorsal portion of the spine, and occasioned great deformity of the vertebral column, and complete paralysis of sensation and motion in the lower limbs. By gradual extension with the aid of pullies, and by pressure upon the projecting vertebræ, the deformity of the spine was evidently diminished, and the spinal cord was so far relieved from pressure as to allow of a slight return of sensibility in the lower limbs. For nine or ten days, blood was taken from the neighbourhood of the spine, by cupping. The patient progressively recovered, and at the expiration of twelve months, he had so far regained the use of his limbs as to resume his duties as a coachman, being able to mount his box and to take care of his horses.

Since the publication of Mr. Crowfoot's case I have twice adopted the same practice, with such a degree of success as to convince me that extension should be generally employed in fractures of the spine, when attended with apparent deformity and paralysis. In both cases the deformity was greatly diminished by the extension, but was slightly reproduced after the extension was discontinued. The first patient survived only sixteen days, and on dissection it was found that the spinal cord had been nearly severed by the compression to which it had been exposed. Although the injury of the cord was in this case beyond the reach of relief, yet the diminution of suffering after the broken vertebræ had been brought nearer to their natural position, was so great that, for several days, the patient spoke of it with the liveliest gratitude. The subject of the second case recovered, and seven months after the accident could walk tolerably well with the aid of crutches, and attended the hospital as an out-patient.

Paraplegia from Protrusion of the Intervertebral Substance.—Mr. T. W. King† has found in the spinal canal, small protrusions, or herniæ, of the intervertebral substance, somewhat pedunculed,

* *Transactions of the Provincial Medical and Surgical Association*, vol. xi.

† *Medical Gazette*, June, 1844.

and separating the bands of ligament between two vertebræ; and, some time ago, anticipated that these protrusions would hereafter be found to be a cause of paraplegia. He was, therefore, not surprised, on seeing a case recently recorded by Mr. Hawkins,* the subject of which became paraplegic after a sprain. After death, several of these protrusions of the intervertebral substance were seen between the vertebræ of the neck and loins. The largest were of the size of a pea, and evidently pressed upon the spinal cord.

Spina Bifida.—Mr. Hewett† has related some cases of spina bifida, and, after adverting to the state of the nervous structures in this affection, as observed on dissection, concludes his paper with the following practical rules, in reference to the operation of puncturing these tumours:—

The tumour ought never to be punctured along the median line, especially in the sacral region, for it is generally at this part that the cord and its nerves are connected with the sac.

The puncture should be made at one side of the sac, and at its lowest part, so as to diminish the risk of wounding any of the nervous branches.

The instrument ought to be a grooved needle or a small trocar, for if a lancet be used there will be a greater risk of wounding some important part contained in the cavity of the tumour.

OF THE NECK.

Tracheotomy.—The operation of tracheotomy has of late been frequently performed, in cases of foreign bodies in the air-passages, and of chronic and acute affections of the larynx.

(*a.*) *Foreign Bodies in the Air-passages.*—The trachea has been opened, on account of foreign bodies in the air-passages, by Sir Benjamin Brodie,‡ Dr. Houston,§ Mr. Casson,|| Dr. Cumming,¶

* *London Medical Gazette*, May 17, 1844.

† *Ibid.*, July, 1844.

‡ *Transactions of the Royal Medico-Chirurgical Society.*

§ *Dublin Medical Press*, vol. xi., p. 86.

|| *Provincial Medical Journal*, September 2, 1843.

¶ *London and Edinburgh Journal of Medical Science*, April, 1845.

Dr. Duncan,* and Mr. Griffiths.† From these cases, and others previously recorded, we learn:—

1. That a foreign body may be lodged in the air-passages without producing any disturbance of the respiratory sounds cognizable by auscultation. Three cases, noticed by Sir Benjamin Brodie, had been examined by experienced stethoscopists, who failed to detect anything unusual in the sounds of respiration. Dr. Houston remarks, in reference to his case, that it was its history and general symptoms, rather than the signs furnished by auscultation and percussion, that led to the conclusion that a foreign body was lodged in the wind-pipe; and that justified the performance of the operation.

2. That a foreign body may be lodged in the air-passages for several days or weeks, without materially incommoding the patient. In one of the cases to which I have referred, the subject of the accident was able to take long journeys, and to entertain his friends at dinner, although he suffered occasionally from troublesome cough when he had been exposed to the cold. Mr. Morley, of Leeds, informs me that a little boy, who had accidentally introduced a tamarind-stone into the wind-pipe, experienced no inconvenience from it for a week. Subsequently, however, he became affected with pneumonia, which in the end proved fatal.

3. That, although the body may for a time have remained quiescent, it may, on changing its situation, excite dyspnœa, or even asphyxia. Thus the subject of the second case mentioned by Sir Benjamin Brodie, who had a berry of the bladder-senna in the wind-pipe, suddenly expired on the seventh day.

4. That where these substances become impacted in the bronchi, they give rise to a dangerous and, generally, fatal form of inflammation in the parts where they are lodged. Some rare instances have however occurred in which life was preserved, during repeated inflammatory attacks, until, after the lapse of a long period, the foreign body was expelled. Mr. Rose‡ has related a case in which a "beech-mast," after nine years and a half, was thus expelled during a fit of coughing.

5. That the chief evidence of the existence of a foreign body in

* *Northern Journal of Medicine*, February, 1845.

† *Provincial Medical Journal*, September 2, 1843.

‡ *Ibid.*

the air-passages, when it is moveable, is derived from the varying position of the substance being rendered sensible to the feelings of the patient, and from its producing a sensation of suffocation on coming in contact with certain parts of the air-tube.

6. That when the foreign body possesses considerable specific gravity, the diagnosis may be greatly assisted by inverting the body of the patient. It is, however, the opinion of Sir Benjamin Brodie, that such an experiment ought not to be instituted, unless an artificial opening have been previously made in the trachea. In the case of a man who had introduced a shilling into the windpipe, Dr. Duncan, assisted by Professor Simpson, of Edinburgh, and other friends, having instruments ready to perform tracheotomy should circumstances demand it, caused the body of his patient to be rapidly inverted, when, "after a shake or two, Dr. Simpson at the same time moving the larynx rapidly from side to side, the shilling passed into the mouth and fell upon the floor." Although the practice was successful, Dr. Duncan states that he is not sure that it should be generally adopted in similar cases.

7. That the operation of tracheotomy should be early performed in all cases in which a foreign body is lodged in the air-passages. This operation has the two-fold object of obviating the risk of asphyxia, and of facilitating the removal or escape of the offending substance. Professor Porter,* to whom we are indebted for having first suggested in these cases the formation of an artificial opening in the trachea, for the purpose of preventing spasm of the glottis, has stated that "he could not conceive a case in which there was rational evidence of a foreign body having entered the trachea, in which the operation of tracheotomy should not be deemed necessary, not with the certainty of its being expelled, but merely in the hope of such an occurrence. He could mention eight or nine cases in his own recollection, in which the foreign body was not expelled. The real necessity for the operation," he says, "was not so much connected with the discovery and extraction of the foreign body, which often could not be accomplished, as with the removal of the spasm of the glottis." Few surgeons, I believe, would in the present day hesitate to act in accordance with these opinions of Professor Porter, when there is evidence, not only of the presence of a foreign body in the windpipe, but also of its being *moveable*.

* *Dublin Medical Press*, vol. xi., p. 86.

In cases, however, in which the substance is impacted, I conceive that it is equally the duty of the surgeon to open the windpipe, since at any period the foreign body may become dislodged, and may excite suffocation. I have already alluded to one instance in which the foreign body was quiescent seven days, and then becoming dislodged, produced instant death. I have mentioned another case in which the substance was loosened from its bed and expelled, after the lapse of nine years and a half. When the body does not admit of immediate removal, a tube should be introduced into the trachea, to prevent the closure of the wound. Had this plan been adopted, the necessity for a second operation, as in the highly interesting case recorded by Mr. Griffiths, would have been obviated.

(*b.*) *Chronic Diseases of the Larynx.*—Some interesting cases have been recorded, in which the larynx or trachea has been opened for the relief of chronic affections of the larynx.

Professor Ehrman,* of Strasbourg, has performed laryngotomy, on account of polypus of the larynx. The diagnosis, which was very difficult, is stated to have been established by several consultations. The patient was a female, aged thirty, who became affected with a fibro-cellular excrescence in the larynx. This offending body became engaged between the lips of the glottis, and suffocation became so imminent that the wind-pipe was opened at the crico-thyroid membrane, and a tube was introduced into the wound. The next day, when the patient was calm and breathed freely through the tube, M. Ehrman divided the thyroid cartilage, and having separated its two alæ, excised the polypus by carrying the bistoury along the entire length of the left inferior ligament of the glottis. The patient perfectly recovered.

Mr. Orr† has performed tracheotomy for a case of ulceration of the fauces implicating the glottis, with perfect relief to the patient.

Four cases have been recorded by Dr. Watson,‡ in which this operation was successfully performed by himself, Dr. Williamson, and Mr. Fergusson, for the relief of chronic affections of the larynx.

I have lately, in two instances, relieved impending asphyxia, from chronic disease of the larynx, by opening the trachea.

* *Dublin Medical Press*, vol. xi., p. 296.

† *Ibid.*, November 27, 1844.

‡ *Edinburgh Medical and Surgical Journal*, vol. lxi., p. 341.

Tracheotomy has been performed by Mr. Bush,* upon a young man who was suffering from chronic ulceration of the tongue and fauces, which had implicated the glottis. The patient had become insensible, and respiration had ceased. After opening the windpipe at the crico-thyroid membrane, and introducing a flat silver tube, artificial respiration was effected by periodical compression of the thorax, which answered the purpose completely. It was sustained without intermission, and without any evident sign of life in the man, beyond a faint pulsation in the carotids, for three-quarters of an hour, when, upon intermitting the artificial respiration for a short time, one spontaneous inspiration was made, and in a few seconds repeated, and very shortly natural inspiration became established, together with consciousness. He rapidly regained perfect health, his cough entirely ceased, and the ulcerated surface cicatrized. He regained the power of expiration, but could not inspire through the larynx; it was, therefore, necessary for him to wear the tube.

(*c.*) *In Acute Diseases of the Larynx, or Trachea.*—Dr. James Arthur Wilson† has related two cases in which relief was obtained from tracheotomy, when the life of the patients was placed in imminent danger, from acute inflammation of the fauces extending to the larynx.

Mr. Phillips‡ has performed this operation, in a case of œdema glottidis. The patient had been suffering from acute synovitis and erysipelas. After the operation the respiration became perfectly quiet, but sinking gradually supervened.

M. Trousseau§ has recorded the results of his experience in 121 cases of croup, in which tracheotomy was performed. He advocates the rather early performance of the operation. During the operation, if he finds it impossible to avoid the thyroid veins by careful dissection, he divides them without tying, since the hæmorrhage always ceases on the introduction of the canula. As soon as he has completed the incision into the trachea, he introduces an instrument to keep the edges of the wound apart, raises the

* *Lancet*, December 21, 1844.

† *Transactions of the Royal Medico-Chirurgical Society*, vol. xxvii.

‡ *London Medical Gazette*, April, 1844.

§ *British and Foreign Medical Review*, April, 1844.

child from the recumbent posture, and waits for a few moments until the hæmorrhage ceases. He then, if the case is very urgent, introduces the canula; if the symptoms are less pressing, he allows the dilator to remain for some time, in order to afford opportunity for the expulsion of the false membranes, while he further endeavours to favour their discharge by dropping water into the bronchi, and by sponging out the trachea repeatedly. After a time the canula is introduced, and as often as the respiration becomes difficult it must be removed, if there be any reason for referring the dyspnœa to any obstruction of the tube. Usually it is sufficient to change the canula twice in twenty-four hours. At the time of withdrawing the canula the dilator should be employed; and while the edges of the wound are thus kept apart, the trachea should be sponged out, and the medicated applications employed. In the course of two or three days the use of the dilator becomes unnecessary. If the case should advance favourably, the same sedulous care to keep the canula free becomes unnecessary after the fourth or fifth day; and if the air should appear to pass at all by the larynx, the canula may be incompletely closed by a plug of cork. If respiration still go on well, the size of the tube may be reduced every day, until it is finally removed, usually from the tenth to the thirteenth day. M. Trousseau attaches great importance to the use of local remedies. These consist in dropping into the air-passages from fifteen to twenty drops of a solution of about five grains of nitrate of silver in an ounce of water, and at the same time cleansing the trachea with a sponge dipped in the same solution.

The results, however, of his treatment are by no means brilliant. M. Trousseau has operated in 112 cases, in twenty-seven of which the patients survived; it cannot, however, be fairly assumed that the life of the patients in all these cases would have been sacrificed but for the operation, provided active treatment of the ordinary kind had been employed.

Œsophagotomy.—Dr. Martini has performed œsophagotomy for the removal of a piece of bone lodged in the œsophagus. During the performance of the operation the bone was swallowed. The patient died on the third day, when the pharynx was found in a state of gangrene. In a case of obstruction of the œsophagus,

from a tumour implicating its walls, supposed not to be malignant, Dr. Watson,* of New York, cut down upon the œsophagus, divided the obstructed part, and introduced an elastic tube into the stomach. The patient survived about three months, but before her death the larynx had become implicated in the disease, and tracheotomy was performed.

Thyroid Cysts.—Two cases of cysts, developed either in the substance of the thyroid gland, or in its vicinity, have been successfully treated by injections of iodine, by Dr. Bouchacourt.† In both, suppuration of the cyst followed the injection. Mr. Smith, of Leeds, and Mr. Hey, have each adopted this mode of treatment in two cases. Three were cured by one injection, without suppuration; in one the fluid is re-accumulating, although more slowly than before. I have also succeeded in curing a thyroid cyst, of very large size, by one injection of iodine. Suppuration did not occur.

M. Fleury‡ has treated two cases of this disease by incision and the removal of a portion of the cyst. In both, the wound healed favourably, and the cure was permanent.

OF THE THORAX.

Paracentesis of the Pleura.—The operation of tapping the pleura, for the removal of acute or chronic effusions of serum or pus, has of late been performed much more frequently, and with greater success than formerly. Of twenty-four cases in which the operation was performed, under the immediate observation of Dr. Hamilton Roe§ or his friends, eighteen recovered and six died.

The circumstances which have rendered this operation more successful are, probably, the earlier performance of it, and the greater care employed in preventing the access of air to the pleura. The early performance of the operation is not only more favourable as far as the preservation of life is concerned, but Dr. Roe considers that it allows of the compressed lung becoming again expanded, and that recovery may take place without any permanent con-

* *American Journal of the Medical Sciences*, October, 1844.

† *Bulletin Générale de Thérapeutique*, September, 1844.

‡ *Dublin Journal of Medical Science*, May, 1845.

§ *Transactions of the Royal Medico-Chirurgical Society*, vol. xxvii.

traction of the affected side of the chest. As soon as it is clear that pleurisy is subdued, and that a large quantity of fluid remains in the chest, he would proceed at once to ascertain its quality by the use of the exploring trocar. If it is found to be purulent, the operation should be immediately performed; but if serous, we may wait until the end of the third week, to see if medicine will cause absorption to proceed rapidly.

Dr. Roe does not entertain any serious apprehension of evil from the admission of air into the pleura during the operation; on the contrary, he has found only one case in twenty-four in which the air was not speedily absorbed; nevertheless, he believes the continued ingress and egress of air to be sometimes highly injurious, from keeping up an inflammatory state of the pleura.

Mr. Cock,* whose experience in this operation has been very extensive, states that in every case which he has had under his own treatment, he has had occasion to tap below the angle of the scapula, between either the seventh and eighth or the eighth and ninth ribs, at a point distant from one to three inches from the angle of the ribs. The instrument employed was a trocar and canula, one-twelfth of an inch in diameter, and about two inches in length, exclusive of the handle. The small size of the canula ensures the slow and gradual removal of the fluid, and enables us to avoid the admission of air.

Mr. Cock adopts the following mode of operating:—The patient is placed in a sitting posture across the bed, so as to admit of the body being readily lowered and supported over its edge. A small puncture being made through the skin with a lancet, at the upper edge of a rib, the trocar and canula are carried through the opening in the integument into the chest, obliquely upwards. On withdrawing the trocar the fluid flows in a steady, uninterrupted stream, slightly augmented in force at each expiration. After a time the stream becomes checked at each inspiration, when the body of the patient should be lowered into the horizontal posture, and turned slightly on the affected side. The fluid now flows again in an uninterrupted stream, and, when it begins to flag, a still further quantity may be obtained, if the state of the patient admit of it, by an assistant making steady and continuous pressure on the lower part of the chest, by grasping it with both

* *Guy's Hospital Reports*, April, 1844.

hands. This may be kept up for a few seconds or a minute, until a continuous stream can no longer be obtained, when the canula should be immediately removed.

To prevent the entrance of air into the pleura, M. Trousseau* wraps round the head of the canula a strip of very thin skin or membrane, which the fluid raises easily in passing out, but which falling on the orifice during deep inspiration, effectually closes it.

A similar, but more perfect, device is adopted by Dr. Fletcher,† of Birmingham. He recommends the use of a canula lengthened beyond the shoulder about three-quarters of an inch. To this elongated portion of the canula a piece of intestine of some small animal is to be attached, which is pulled out as the trocar is withdrawn, and hangs down about three-quarters of an inch.

OF THE ABDOMEN AND PELVIS.

Lumbar Cysts.—The accidental developement of cysts, of large size, in the neighbourhood of the kidney, in consequence of severe contusion of the abdomen, appears to be not an unfrequent occurrence. The real character of these cysts cannot at present be positively determined. Whether they invariably result from a laceration of the kidney, and a circumscribed effusion of its secretion, or are developed independently of any lesion of this organ, or whether cysts in the lumbar region, resulting from accident, may not occur of both these characters, must be left for future observation to determine.

A brief notice of some recent cases of lumbar cysts may tend in some degree to elucidate their history. The two following are related by Mr. Stanley:‡—

A woman having been crushed by a cart, experienced on the following day severe pain and distension of the abdomen and fever. In a few days, the general distension having subsided, there remained a circumscribed painful swelling in the right hypochondrium. After some days, fluctuation was observable, the fluid gradually approached the surface, and a trocar being introduced, two or three pints of straw-coloured urinous fluid were extracted.

* *Lancet*, September 14, 1844.

† *Provincial Medical and Surgical Journal*, March 19, 1845.

‡ *Transactions of the Royal Medico-Chirurgical Society*, vol. xxvii.

The urine had throughout been passed freely and in full quantity. The fluid accumulating again, in about ten days six pints were withdrawn. In a few days it had re-accumulated; the patient gradually sank, and died in the tenth week from the receipt of the injury. The fluid removed at the second operation was albuminous, and contained a small quantity of urea, but from the indistinct recognition of the healthy urinous salts in it, a high chemical authority pronounced it not to be urine. After death, a large cyst was found on the right side of the abdomen, behind the peritoneum, extending upwards to the diaphragm, and downwards to the pelvis. A passage was observed leading from the cyst to the pelvis of the right kidney, the aperture in the latter being large and irregular.

The subject of the second case was a boy, aged nine years, who had been squeezed between the wheel of a cart and the curb-stone. After the general swelling consequent upon the accident had subsided, a circumscribed oblong tumour was recognised through the abdominal walls, extending from the base of the chest nearly to Poupart's ligament, and anteriorly as far as the median line. The urine had been passed naturally. A trocar was introduced, and fifty-two ounces of clear yellow fluid were discharged. In eleven days afterwards, forty-eight ounces, and again in sixteen days, sixty-four ounces of fluid were removed. After three months it was again punctured, and a sixth time in three weeks. The swelling now remained stationary for some time, the patient's health was good, and, after a few months, the tumour, without any further treatment, was slowly diminishing. The fluid, after the second puncture, was highly albuminous, and did not exhibit the urinous salts; after the sixth puncture, it was evidently of a urinous character; urea was unequivocally present, and also chloride of sodium, alkaline carbonate and sulphates, together with the peculiar extractive matter of urine.

Mr. Cæsar Hawkins* has related the case of a boy, seven years of age, who was the subject of a cyst in the neighbourhood of the kidney, consequent upon a blow on the abdomen. A puncture was made, and three pints of clear fluid were drawn off, containing scarcely any albumen, and without urinary smell. The tumour filled again, and was again punctured. The boy died at the end

* *Lancet*, November 25, 1843.

of three weeks. After death, a large cyst was found, extending up the affected side as high as the liver; it lay in contact with the kidney, but had no connexion with it.

I have been favoured by my friend, Mr. Hey, with the following brief history of a case which I attended in consultation with him, along with Mr. Aston Key, and Mr. Smith, of Leeds. A young lady, aged thirteen, was thrown from her horse with considerable violence, falling on her back and right side. There was not any external mark of injury, but she complained of severe pain in the right hypochondriac region. On the nineteenth day after the injury, a circumscribed tumour was perceived in the right side of the abdomen, immediately below the ribs, and extending backwards into the lumbar region. It gradually increased in size, and fluctuation became distinct. It was attended with severe pain, and great emaciation ensued. About two months after the accident, a trocar was introduced at the anterior edge of the quadratus lumborum, so as to avoid puncturing the peritoneum, and eight pints of fluid were removed. A great portion of the fluid, which was of a pale straw colour, coagulated spontaneously. It was analyzed by Mr. West, who was unable to detect in it any urea or the constituent salts of urine. A second tapping was performed after ten days, when six pints of fluid were removed, after which a continued oozing took place from the puncture. A metallic canula was subsequently introduced, the discharge gradually diminished in quantity, and the health of the patient improved. The canula, after having been worn for about twelve months, was withdrawn. The wound is now closed, and the young lady enjoys perfect health.

Omental Sacs of Hernia.—From the observations of Mr. Hewitt,* it would appear that the investment of hernia in a complete omental sac is not of unfrequent occurrence. These sacs were observed four times in thirty-four operations for strangulated hernia, performed at St. George's Hospital, in 1842–43. Two of the herniæ were femoral, one inguinal, and one umbilical. The omental sacs sometimes attain a large size; they are generally adherent to the neck of the sac; sometimes they lie loose in the cavity of the hernial sac, or the two sacs may have contracted adhesions with each other; the intestines may be adherent to the

* *Transactions of the Royal Medico-Chirurgical Society*, vol. xxvii.

omental sac; the neck of the latter may become the cause of strangulation. The cases related by Mr. Hewitt give rise to a question of practical importance, respecting the course to be pursued when the hernial sac appears to contain thickened omentum only. In all such cases he judiciously recommends that the omentum should be drawn out and carefully examined, that the operator may ascertain whether it does not form a sac containing a portion of intestine. If the omentum is thickened, and firmly united to the neck of the hernial sac throughout its whole circumference, a longitudinal incision should be carefully made in the whole length of the thickened omentum, to determine whether it does not form one of these omental sacs. The precaution of introducing the finger to ascertain that the neck of the sac is free, is in these cases particularly necessary.

Operation for Strangulated Hernia without opening the Sac.—This important modification of the operation for strangulated hernia, revived and perfected by Mr. Key, is gradually assuming the position in the estimation of the profession, to which, I believe, it is entitled. Successful cases, treated in this manner, have been recorded by Dr. Duncan,* of the Edinburgh Royal Infirmary, Professor Warren,† of Boston, and Mr. Solly,‡ of Guy's Hospital. Besides these, many unedited cases, of the most gratifying character, have come within my knowledge. One of these, which I witnessed a week ago, I would briefly notice. It was a case of irreducible umbilical hernia, into which a fresh descent of the viscera had taken place, and strangulation occurred. Mr. Smith divided the stricture without opening the sac; the newly descended portion of the viscera was returned, and the patient recovered.

Hernia reduced in Mass.—Mr. Wade,§ of the Westminster Hospital, has lately operated on a patient in whom he reduced a right inguinal hernia in mass. The inguinal canal was exposed by a free division of the tendon of the external oblique, the sac was opened, a membranous band, distant as far as the finger could

* *Northern Journal of Medicine*, November, 1844.

† *American Journal of the Medical Sciences*, January, 1844.

‡ *Medical Times*, December 28, 1844.

§ *Ibid.*, July 5, 1845.

reach, was divided, and the intestine released from strangulation. The patient recovered.

Enterotomy of the Small Intestine.—M. Maisonneuve* has adopted a mode of practice which, I am convinced, is calculated to save the lives of many subjects of strangulated hernia, who would otherwise perish. It frequently happens after the operation for hernia, that the strangulated portion of intestine, when released from stricture and replaced within the abdomen, is incapable of resuming its functions, symptoms of obstruction continue, and the intestine above the part strangulated remains in a state of tympanitic distension. M. Maisonneuve, having operated upon a patient for strangulation of the small intestine, found, five or six hours after the operation, that the obstruction was unrelieved. He separated the agglutinated edges of the incision, and, passing his finger into the abdomen, felt a distended coil of small intestine, adherent by false membrane to the surrounding parts. Without materially disturbing the adhesions, he seized the distended coil of intestine with the forceps, and by means of probe-pointed scissors, established an opening in it, through which the intestinal contents were freely discharged. The urgent symptoms were relieved, and the patient recovered.

M. Maisonneuve also proposes the establishment of an artificial anus, by incision of the small intestine, in cases of internal strangulation.

Lumbar Enterotomy.—In July, 1844, M. Amussat† reported his ninth case of lumbar enterotomy. His patient was fifty-three years of age, had long been subject to progressively increasing constipation, and had suffered from complete obstruction of the bowels twenty days. The descending colon was opened, and the patient had a most satisfactory recovery. The case derives peculiar interest from the absence of any positive evidence of the actual seat of obstruction, on which account it became a question of great difficulty to determine whether the opening should be made in the ascending or in the descending colon. Upon the following grounds, M. Amussat, with the concurrence of his colleagues, and

* *Encyclographie des Sciences Médicales*, October, 1844, and January, 1845.

† *Gazette Médicale de Paris*, No. xxxii.

of Sir Philip Crampton, who was in Paris at the time, determined to open the colon at its descending portion, namely:—the chronic character of the disease, which had caused progressively increasing constipation, and ultimately complete obstruction; the frequency of stricture or organic disease at the lower part of the sigmoid flexure, compared with obstructions in other parts of the intestinal canal; the absence of vomiting of fæcal or intestinal matters, as usually occurs when the obstruction is seated in the small intestine or at the commencement of the colon; and, lastly, the impossibility of injecting a copious enema.

Upon these circumstances M. Amussat founded the presumption that the obstruction was seated in the lower portion of the large intestine—an inference which was proved by the operation to be correct.

As a sign diagnostic of the seat of obstruction, I attach considerable value to the peculiar form of the tympanitic swelling. When, for instance, the obstruction is situated in the upper part of the large intestine or in the ileum, and tympanites occurs, the distended coils of the small intestine may be recognised by the sight or touch; but when it is situated at the sigmoid flexure or in the rectum, the colon being distended, forms a more uniform tumour, elongated transversely, which for the most part, if not entirely, obscures the coils of the small intestine. In the patient upon whom I performed this operation, for obstructed sigmoid flexure of the colon, this peculiar form of tumour of the abdomen was strongly marked, and there was also very evident tympanitic distension of the left lumbar region, not only anteriorly, but also posteriorly.

During the performance of the operation, it is difficult to determine, when a distended portion of intestine is seen, whether it be the large or the small intestine. As yet, M. Amussat does not know of any positive sign by which we can decide this question; he nevertheless attaches considerable importance to the appearance of a yellow mark, which indicates the point of reflexion of the peritoneum from the muscular coat of the colon.

It should here be stated, that M. Amussat has twice performed the operation without wounding the peritoneum, even when the obstruction of the bowels was unattended with tympanitic distension.

M. Amussat has in nine cases made an artificial opening in the colon, by a transverse incision in the lumbar region, without opening the peritoneum; in three instances, the operation was performed on infants, for the relief of congenital obstruction; in six cases, on adults. In the latter, the colon was opened three times on the right, and thrice on the left side.

Lumbar enterotomy has lately been performed by M. Malgaigne,* M. Baudeloque,† and Mr. Evans,‡ of Derby.

In the operation performed by Mr. Evans, in March, 1844, the ascending colon was opened, and an immense quantity of semi-fluid fæcal matter escaped, to the great relief of the patient, who recovered from the operation, but died three months and a half afterwards, from an attack of peritonitis. After death, it was ascertained that stricture existed just beyond the angle formed by the ascending and transverse portions of the colon.

The subject of lumbar enterotomy has been ably treated in an article published in the *British and Foreign Medical Review* for October, 1844.

Paracentesis of the Intestine for Tympanites.—The practice of paracentesis of the abdomen has been lately adopted by Sir Henry Marsh,§ for the relief of excessive distension of the abdomen from flatus, with the most soothing effect, and without any injurious consequences. The operation was performed with a fine trocar, and repeated several times, with great relief to the patient. M. Levret || has also adopted the same practice. After the evacuation of the air, immediate relief was obtained, and the patient rapidly recovered.

Intestino-vesical Fistula.—Mr. Worthington,¶ of Lowestoft, has related to the Royal Medico-Chirurgical Society, the dissection of a case of intestino-vesical fistula in a female. The patient having suffered for four years from pain in the right iliac region, disturbance of the urinary organs commenced, the urine becoming bloody, ropy, offensive, and loaded with extraneous matter. In about four

* *Lancet*, October 6, 1844.

† *Encyclographie des Sciences Médicales*, February, 1845.

‡ *Medical Times*, April 19, 1845.

§ *Lancet*, December 28, 1844.

|| *Bulletin de l'Académie Royale de Médecine*, tome ix., p. 9.

¶ *Lancet*, July 6, 1844.

months she died. On examination after death, it was found that an opening existed between the ileum and urinary bladder, large enough to admit the point of the fore-finger. The coats of the ileum, near the ulcer, were thickened and indurated, and the canal consequently strictured.

Hæmorrhoids treated by Nitric Acid.—Dr. Houston,* in reference to the treatment of hæmorrhoids by nitric acid, which he some time ago recommended, makes the following remarks:—"The failures which have occured in other hands may, perhaps, be often traceable to want of discrimination as to the fitness of the case for the remedy, or to some imperfection in the application of the latter. As I have known errors of this kind to happen, I must repeat, that the only case which the nitric acid will serve, is the *internal* bleeding pile—that soft, red, strawberry-like elevation of the mucous membrane, for which I have used the term *vascular tumour,* and which the acid removes by the production of a slough of its surface. The surface to be acted upon must be soft, and free from any coating of cuticle, such as is apt to form upon it by persistent prolapse; for if the acid be used in a case so circumstanced, nothing more than a removal of the cuticle may be expected from the application; and further to ensure to the caustic its full effect, the part to be touched should beforehand be cleared of all mucous or other adherent fluids. There is no danger, that I know of, to be apprehended from the application of the acid. The acid must be laid on in quantity, and rubbed in with force enough to be pressed into the pores of the surface. At the best the caustic produces only a very superficial slough, and, on this account, it may be necessary in some cases to make a second or a third application."

Sir Philip Crampton† has added his testimony in favour of this mode of treatment.

I have lately had a case in which one application of the acid was attended with perfect relief, both of the hæmorrhoidal protrusions and of the hæmorrhage.

Relaxed Rectum.—In the treatment of simple relaxed rectum, Dr. Hunt‡ recommends the avoidance of all aperient medicines,

* *Lancet*, December 14, 1844.

† *Ibid.*, December 28, 1844.

‡ *Ibid.*, December 7, 1844.

the injection of a pint of cold water into the bowel every night previously to going to bed, the removal of prolapsus, and the application of belladonna ointment to the irritable sphincter. In the case of intro-susception of the rectum, in addition to the use of cold-water injection, the exhibition of some mild aperient, taking care that whilst a costive and hardened state of the fæces is prevented, purging is avoided, and a course of hydrargyrum cum creta, with hyoscyamus or conium, or the iodide of potassium with sarsaparilla, are recommended. Mr. Bransby Cooper regards the evacuating of the bowels at night, immediately before retiring to rest, as a rule of great importance in the treatment of disease of the rectum. When the bowels are evacuated at bed-time, the patient having to remain for many hours in the recumbent posture, the rectum is in a state of repose. By this plan, Mr. Cooper states that a cure is frequently obtained without the use either of instruments or medicine.

Fistula in Ano.—Mr. Hird* has related a pathological fact, which is at variance with an opinion recently advanced by Sir Benjamin Brodie, that an internal opening invariably exists in cases of fistula in ano, and may be found if the examination is carefully conducted, and if necessary repeated. Mr. Hird examined, after death, the body of a gentleman who had long suffered from phthisis, and had been the subject of a fistula which opened near the anus. On the most careful and minute investigation, no internal orifice of the fistula could be found, neither were the walls of the bowel unusually attenuated.

The treatment of fistula in ano by ligature has been revived by Mr. Luke.† Having introduced the ligature, he keeps it moderately tight by means of a small screw-tourniquet, thus gradually dividing by ulceration those parts usually divided by the knife. The following are stated by Mr. Luke as the advantages attached to this mode of treatment:—

1. The shorter period which usually elapses before the final cure.
2. The less pain which is usually experienced during the course of treatment.
3. The absence of all cause for dread of the knife, and the

* *Lancet*, November 23, 1844.

† *Ibid.*, February 22, 1845.

consequent inducement which it offers to the timid to submit to an effective curative treatment.

4. The avoidance of all danger from bleeding.

For drawings and a description of the screw-tourniquet and the apparatus for introducing the ligature, I must refer to the *Lancet* of February 22, 1845.

Mr. Lomas* employs a silver wire as a ligature, which he introduces in the following manner:—Having passed a probe-director along the fistula and through its internal orifice, its point, being very flexible, is directed downwards and out at the anus, by the finger previously introdnced within the rectum; the structures to be divided are now upon the instrument, and as it were everted. The wire is then passed along the groove of the director, and the ends are twisted together until a very moderate degree of compression is exerted upon the enclosed parts. It promotes the personal comfort of the patient to leave the twisted ends rather long, and to fix them on the sacrum with a strip of adhesive plaster. All that remains to be done is to twist up the ligature as it becomes slack, and in a week or a little more it is free.

Mr. Lomas, however, has not found any strong reason to prefer this mode of operating to the division of the parts with the knife.

Pelvic Abscess.—Inflammation of the uterine appendages, terminating most frequently in abscess, sometimes unconnected with child-birth, but more frequently following delivery within a longer or shorter time, is a subject which has occupied the attention of Dr. Churchill.† He considers the seat of these abscesses as various, and that the disease may affect the Fallopian tubes, the broad ligaments, the ovaries, or the cellular tissue of the pelvis. It may occur either in the acute or in the chronic form. It is sometimes, but not invariably, attended with tumefaction or distinct tumour, which may be situated above Poupart's ligament, occupying the iliac fossa, and extending even to the umbilicus; or it may protrude at the groin below Poupart's ligament. When the abscess is situated low in the pelvis, it may be recognised by a vaginal examination, at one side of the cervix uteri, and the swelling there perceived is evidently connected with the tumour in the groin. The

* *London Medical Gazette*, March 14, 1845.

† *Dublin Journal of Medical Science*, September, 1843.

disease is supposed by Dr. Churchill sometimes to terminate in resolution, and several cases are advanced which seem to countenance this opinion. But in a similar case, in which a hard, painful swelling was felt laterally above the pelvis, Dr. Simpson, by means of the uterine sound, proved that the tumour was formed by the uterus itself, retaining its state of puerperal hypertrophy longer than usual, in consequence of chronic inflammation. In this case the tumour gradually subsided; and Dr. Simpson throws out the conjecture, that supposed phlegmonous tumours of the pelvis, which have terminated in resolution, may have been nothing else than the inflamed and hypertrophied uterus.

The more usual termination of pelvic inflammation is in abscess, the matter of which may escape externally through the abdominal walls; internally into the peritoneum, producing alarming and sometimes fatal peritonitis; into the vagina, the bladder, the intestinal canal, more especially into the rectum; or into the surrounding cellular tissue burrowing extensively until it finds an outlet. When suppuration has occurred, it is highly important to promote the early evacuation of the matter by incision. The best situation for the opening is through the abdominal walls; the next through the vagina.

In an interesting case, related by Dr. Simpson, he preferred making the puncture through the rectum. The swelling was situated at the upper part of the vagina, between the uterus and rectum; its nature was obscure, and the feeling of fluctuation very indistinct. An exploring needle being passed from the rectum through the dense walls of the tumour, a drop or two of thin pus escaped, and immediately a larger perforation into it from the bowel was made with Pouteau's trocar.*

Dr. Lever† considers these abscesses to originate in the cellular tissue of the pelvis, and, consequently, that they are situated internally to the pelvic fascia, but externally to the peritoneum. They may, he observes, be evacuated, according to their situation, by incision, through the abdominal muscles; through the vagina, by means of the speculum and a guarded lancet; or through the rectum, by means of a trocar, as in a case recorded by Dr. Simpson.‡

* *London and Edinburgh Journal of Medical Science*, November, 1843.

† *Guy's Hospital Reports*, April, 1844.

‡ *London and Edinburgh Journal of Medical Science*, 1843, p. 1013.

Abscess of the Prostate.—M. Lallemand* has successfully adopted an incision, similar to that practised in lithotomy, for the relief of chronic abscess of the prostate. He adopted the bilateral incision, with the lithotome of Dupuytren. The incision was followed by a copious discharge of pus. After the lapse of six days, the walls of the abscess were freely cauterised with nitrate of silver. In three weeks, the urine began to pass by the urethra, and the urinary fistula rapidly closed, the patient having recovered the power of evacuating the bladder without difficulty.

Spermatozoa in the Fluid of Hydrocele.—The fact of the occasional existence of spermatozoa in the fluid of hydrocele, observed by Mr. Liston,† has been confirmed by Mr. Lloyd.‡ The form of the disease from which Mr. Liston obtained the fluid containing the spermatozoa, was the encysted; and he conjectured that this variety of hydrocele might possibly be the result of a dilatation of some portion of the spermatic secretory apparatus. In this case the cyst would be lined with mucous membrane, and, on this account, indisposed to undergo the adhesive process.

Mr. Dalrymple§ suggests that the source of the spermatozoa may have been a wound of the vas deferens, during the operation of tapping, the vessel having been exposed to injury from the constituents of the cord pursuing an irregular course.

An opportunity has been afforded to Mr. Paget,|| of examining the body of a man, after death, which, if it do not throw any positive light upon the subject, at any rate tends to limit the range of the conjecture. In this case there was a large encysted hydrocele, which, in its external appearance, precisely resembled a common hydrocele. The fluid which it contained was without spermatozoa or any other organic particles; it was closed on every side, and was not lined by epithelium. There was a little fluid in the tunica vaginalis, which contained numerous granules, but no spermatozoa, nor any other constituent of semen. Attached to the upper part of the epididymis was a small sac, completely distinct from the former, lined with epithelium, containing an opaque fluid,

* *Gazette Médicale de Montpellier*, June, 1844.

† *Transactions of the Royal Medico-Chirurgical Society*, vol. xxvi.

‡ *Ibid.*

§ *Ibid.*, vol. xxvii.

|| *Ibid.*

in which were numerous spermatozoa and large round granular spermatic globules. The cyst was closed on every side. In reference to the occurrence of spermatozoa in such cysts, Mr. Paget considers the most probable explanation to be, that certain cysts, situated near the organ which naturally secretes the materials for semen, may possess a power of secreting a similar fluid; and that the opaque white fluid found in cysts near the testicles, should probably be regarded, not as an ordinary serous or watery fluid containing spermatozoa, but as semen more or less perfectly formed.

Hydrocele treated by Injections of Iodine.—Two cases of hydrocele have been reported, one affecting the tunica vaginalis, the other the spermatic cord, treated by Mr. Fergusson* by the injection of iodine. After the fluid was drawn off, a drachm of tincture of iodine and three drachms of water were injected into the cavity, and allowed to remain. The inflammation excited by the operation was very moderate, and the result was most satisfactory. Mr. Fergusson, in commenting upon these cases, stated that he was so satisfied of the utility of this mode of operating, that he now seldom adopts any other mode for procuring the radical cure of hydrocele. One of the patients upon whom he operated was seventy-two years of age. To accelerate the absorption of the effusion consequent upon the operation, Mr. Fergusson adopts the practice of strapping the part, which he deems of great importance. I have, on two occasions, injected hydrocele with iodine. The result was highly favourable in both.

Hydrocele treated by Bougie.—M. Guillon† has adopted the following method for the cure of hydrocele:—He plunges a trocar into the bottom of the tumour, and when about half the liquid has escaped, he introduces a wax bougie through the canula into the sac, and causes it to form two or three spiral folds in its interior, so as to distend it greatly. He generally allows it to remain about eighteen hours, or at least till pain and swelling occur.

Hydrocele treated by Incision and Seton.—Professor Porter‡ has proposed a modification of the old operations of incision and seton

* *Lancet*, September 28, 1844.

† *Provincial Medical Journal*, December 30, 1843.

‡ *Dublin Journal of Medical Science*, vol. xxv., p. 398.

in the treatment of hydrocele, as being equally, if not more efficient, and attended with less risk than the operation by injection. He performs the operation in the following manner:—The scrotum being shaven, he makes an incision, from an inch to an inch and a half in length, down to the tunica vaginalis, and examines carefully whether any vessel has been wounded requiring ligature. He then passes a bistoury into the tunica vaginalis at one extremity of the incision, out at the other, and divides it by a rapid withdrawal of the instrument. Having completed the incision, a tent of rolled lint, moistened with oil, and secured by a ligature, so as to be easily withdrawn, is introduced. The operation is then completed. The patient may be put to bed. On the following day he generally bleeds from the arm, to the extent of ten, twelve, or fourteen ounces, particularly if the scrotum is inflamed. The tent is left to become loose and drop out of itself, which usually takes place on the third or fourth day, and need not be replaced; but it is desirable to break up any adhesions that may be formed between the lips of the wound, and to introduce the finger occasionally into the cavity of the tunica vaginalis until the sixth, after which it may be treated by light superficial dressings, and the cure is generally perfect in about three weeks.

Dr. Porter states that he has practised this operation for fifteen years, and that, on comparing it with others, he has not much reason to feel dissatisfied. He considers that the amount of inflammation produced by it is rather below what is desirable than otherwise, and that the cure is perfected much more rapidly than by any other radical mode of treatment whatever.

Varicocele.—Two cases of varicocele are recorded, which have been successfully treated, by Mr. Curling,* by compression of the spermatic veins. "The patent lever moc-main truss" was the instrument which he employed.

M. Vidal† has recorded twenty cases of varicocele successfully treated in the following manner:—The patient being placed in the erect position, the operator grasps with his left hand the affected spermatic cord; and having separated the vas deferens, pinches up between his finger and thumb the spermatic blood-vessels and

* *Lancet*, June 15, 1844.

† *Medical Times*, November 23, 1844.

nerves, and their investing integument. He then pierces the fold thus formed, at its base, with a needle armed with a silver wire. The parts being released from his grasp, there appears an interval of about an inch between the points of entrance and escape of the instrument. The two extremities of the ligature are then brought together, and, comprising the parts in the loop which is formed, are tied over a thick cylinder of linen, interposed between the knot and the skin. The ligature is tightened in two or three days, being relaxed if the inflammatory tension is considerable. In proportion as the soft parts are divided before the thread which presses on them, and as they cicatrize behind at the same time, the ligature is tightened occasionally. From the fifteenth to the eighteenth day, the vessels and nerves of the testis, as well as the tunics which envelope them, are divided, and the skin alone remains, when the ligature may be withdrawn.*

Late Descent of the Testis.—When it is ascertained at the time of birth that the testis has not descended, M. Petrequin† recommends the immediate application of a truss, since late descent of the testis is very uncertain, and exposes the patient to hernia, or to the, perhaps, greater evil of having the gland arrested in the inguinal canal. These views accord with the opinions expressed by Mr. Curling, who has, however, brought forward a considerable amount of evidence, tending to prove that the testis, when lodged in the inguinal canal, is more liable to be atrophied than when it is lodged in the abdomen.

Spermatorrhœa.—Mr. Douglas,‡ of Glasgow, has published an obstinate case of involuntary seminal discharge, which cauterization of the urethra benefitted, but failed to cure. In this case, an injection consisting of one grain of opium, three of acetate of lead, and one ounce of mucilage, used three times a day, and doubled in ten days, proved effectual.

After having read M. Lallemand's observations on this affection, and whilst waiting the construction of a cauterizing instrument, it occurred to me that the morbid sensibility of the orifices of the

* *Braithwaite's Retrospect*, vol. vii.

† *British and Foreign Medical Review*, July, 1845.

‡ *London Medical Gazette*, September 29, 1843.

ejaculatory ducts, which attends and probably causes the complaint, might be relieved by the simple use of the bougie. In two cases I passed the full-sized metallic bougie, once a week, for a few times. The beneficial effect of this treatment so far exceeded my expectations, that I have since not found it necessary to use the cauterizing instrument, in numerous cases which I have treated.

Stricture of the Urethra.—In a case of obstinate traumatic stricture opposite the scrotum, Mr. Syme* lately adopted the following procedure:—A small grooved director being introduced into the urethra, and held firmly against the stricture by an assistant, Mr. Syme compressed the indurated part of the canal between his left fore-finger and thumb, and punctured the integuments with a narrow-bladed knife, directing its point into the groove immediately above the stricture, and pushing the edge forwards until he distinctly felt the whole dense texture give way. A full-sized catheter was then passed.

In obstinate strictures which will not yield to the bougie, Mr. Syme considers complete division of the indurated and contracted part as the only effectual remedy. When the contraction is situated anteriorly, he divides the contracted portion upon a director by sub-cutaneous incision, but when the stricture is situated behind the scrotum, by free incision of the perineum.

Supra-pubic Lithotomy.—M. Segalas† presented to the Royal Academy of Medicine, two old men upon whom he had recently performed the high operation for stone. In one case, the stone weighed four ounces four drachms; in the other, two ounces two drachms. In both, recovery proceeded without interruption. In the first case, the syphon-sound was employed, and under its influence the urine escaped nearly always by the ordinary channel; in the other, the irritation occasioned by it was so great, that it was withdrawn on the fifth day. Nevertheless urine only issued from the wound on the twelfth day. The patient then was relieved by the catheter every two hours, and he subsequently introduced the instrument himself whenever he felt the desire. The cure was completed on the twentieth day.

* *London and Edinburgh Journal of Medical Science*, October, 1844.

† *Lancet*, August 17, 1844.

Bilateral Lithotomy.—Dr. Warren* has in two cases successfully adopted the bilateral section of the prostate in lithotomy. Having made a crescentic incision in the perineum, three-fourths of an inch in front of the anus, and two inches and a half in length, he opened the membranous part of the urethra, and introduced the probe-pointed knife along the groove of the staff into the bladder. The staff was then withdrawn, and the knife, supported by the fore-finger of the left hand, was directed towards the left tuberosity of the ischium, cutting the prostate to the extent of three-fourths of an inch: the same was done on the other side.

Lithotrity.—Dr. Keith† has given a tabular statement of sixteen cases of stone in the bladder, which he has treated by lithotrity. Of these, fourteen were cured, one is said to have recovered, and one died. He forms the same estimate of this operation, as most surgeons of the present day, namely, that for select cases, in which the patient is in perfect health, the calculus small, and the bladder and constitution unirritable, lithotrity is an operation which the public have a right to demand at the hand of every professed operating surgeon.

Lithectasy.—Dr. Wright,‡ of Malton, has successfully removed a large calculus from the bladder of a man, aged sixty, by lithectasy. The operation was commenced on the 27th of September, by a central incision in the perineum, but from some defect in the apparatus, the dilator could not be introduced. The urethra was therefore dilated for a few days with bougies. On the 30th of September, the dilator was introduced, but the parts were so irritable, that the operator was compelled to discontinue the dilatation. Considerable constitutional disturbance followed. On the 8th of October, the dilatation was resumed, and proceeded favourably until the 11th, when the forceps were introduced, and an attempt was made to extract the stone, but it was found to be too large to be removed entire; it was therefore broken by means of a lithotrite, and removed piecemeal. This part of the operation was attended with difficulty. The entire weight of the stone was nearly two ounces. The patient had a favourable recovery.

* *American Journal of the Medical Sciences*, October, 1844.

† *Edinburgh Medical and Surgical Journal*, vol. lxi., p. 123.

‡ *London Medical Gazette*, April, 1844.

This case reflects great credit on the skill of the operator, but I do not think it calculated, even when every allowance is made for the imperfection of instruments, to place lithectasy in a favourable light, as contrasted with the lateral operation of lithotomy.

Lithectasy has also been performed by Mr. Fergusson.* The operation was accomplished without difficulty, but the patient died, from inflammation of the cellular tissue of the pelvis, on the sixth day.

Utero-vesical Fistula.—An interesting case of a most distressing affection, utero-vesical fistula, has been recorded by Mr. Harrinson,† of Reading. The situation of the fistula had long escaped detection, no aperture being discovered between the vagina and bladder. At length Mr. Harrinson was enabled to determine that the urine escaped through the os uteri; and, on a further examination, ascertained that the fistula was situated about three-quarters of an inch within the cervix, and readily allowed the passage of a No. 6 male cathether. A skein of silk, thick enough to close the opening, was introduced in the following manner:—A catheter, armed with a long piece of twine, was introduced into the bladder, the concavity downwards, and being guided by a finger in the os uteri, was conducted through the opening into the vagina; the thread was then seized, and the catheter withdrawn, one end of the string hanging from the vagina, the other from the urethra. To the urethral extremity of the string a skein of six threads of glover's silk was tied, and drawn through the fistula. On the fourth day, irritation beginning to be produced, one string of the skein was removed. During the thirteen following days, all the remaining strings except one were removed. During the whole of this time there was not the least dribbling of urine. The last thread was at length withdrawn, but, unfortunately, the dribbling returned as bad as ever. The seton was again introduced, and, by the continued use of one thread, the patient remains perfectly comfortable.

Ovariotomy.—When the last Surgical Address was delivered, the success attendant upon the extirpation of some ovarian tumours was calculated to dazzle by its brilliancy, and to induce us to form

* *Provincial Medical Journal*, August 5, 1843.

† *Provincial Medical and Surgical Journal*, July 11, 1845.

a more favourable estimate of the operation than a deliberate consideration of its statistics would lead us to adopt.

A warning voice was first raised in the pages of the *British and Foreign Medical Review*,* and subsequently we have been furnished with more ample elements of judgment by the valuable papers of Mr. Phillips† and Dr. Churchill.‡

In June, 1844, the time when Mr. Phillips wrote, as far as he could ascertain, eighty-one operations had been performed for the purpose of extracting ovarian tumours; of these, thirty-five terminated favourably, both as regards the removal of the tumour and the recovery of the patient. In twenty-six instances the tumour was removed, but the patients died. In eighteen cases, adhesions or other circumstances prevented the removal of the tumour; of these, nine recovered and five died. In five cases no tumour was found; all these recovered. Of the eighty-one subjected to operation, thirty-one died.

According to the tables of Mr. Phillips, the cases in which the principle of extracting the tumour entire was followed, the incision having an extent of six inches or upwards, amount to fifty-five. The results of these cases are, twenty-six deaths, twenty-three cures, and six recoveries; the cases in which the plan of procuring the evacuation of as much as was practicable of the contents of the tumour, before the extraction was attempted, are twenty-seven in number. The length of the incision was variable, but usually under six inches. These twenty-seven operations were followed by seven deaths, thirteen cures, and seven recoveries.

From these statements it appears that, as far as the cures are concerned, there is a slight preponderance in favour of what is termed the minor operation, and a much greater preponderance in its favour when the fatality of the operation is considered.

Adhesions do not appear to constitute a bar to the performance of ovariotomy, if in other respects the case should be deemed proper for it; for of forty cases in which adhesions were found, twenty-six survived, or sixty per cent.; whereas, of the whole eighty-one operations, forty-seven recovered, which is at the rate of fifty-eight per cent.

* Vol. xvi.

† *Medico-Chirurgical Review*, vol. xxvii.

‡ *Dublin Journal of Medical Science*, vol. xxv.

In eleven of the eighty-one cases, either no tumour existed or it was found not to be ovarian. Such is a brief abstract of the statistical facts advanced by Mr. Phillips.

It cannot be denied that several persons have been, by this operation, rescued from suffering and restored to health; but, on the other hand, it must not be concealed, that of eighty-one persons subjected to it, thirty-one perished, not at the remote period which by palliative treatment many of them would have attained, but within a few days or a few hours of the operation.

Are we then to consider ourselves justified in sacrificing the lives of thirty-one individuals in eighty-one, to purchase a prolongation of life for thirty-five of this number?

We ought, I conceive, to be able to answer this question in the affirmative before we can regard ovariotomy as a procedure to be generally adopted in the treatment of ovarian tumours. It is, nevertheless an operation which, I believe, under peculiar circumstances, we may feel it to be our duty to perform; when, for instance, our palliative efforts totally fail, and the sufferings of the patient are of so aggravated a character as to induce her to demand at our hands the performance of the operation, after it has been faithfully stated to her that more than one in every three persons hitherto subjected to it, have died within a few days or hours of its performance. Under these circumstances, I am of opinion that we may be justified in operating, provided the case exhibit no peculiar characters which of themselves would forbid the interference of the surgeon.

Uterine Sound.—Dr. Simpson* has made a most important, addition to our means of diagnosis in affections of the uterus and other pelvic organs, by the employment of the uterine sound or bougie. This instrument is similar in form to a male catheter. It is provided with a flat handle, and terminates in a rounded knob or bulb. The intervening stem tapers gradually from the handle to the knob, the thickest part being nearly one-fifth of an inch in diameter, and the thinnest part one-eleventh of an inch. The greater thickness of the extremity next the handle is necessary to give that portion of the instrument the requisite degree of

* *London and Edinburgh Journal of Medical Science*, 1843, pp. 555, 660, 701, and 1009.

strength and resistance. It is more slender towards the other extremity, to allow of its easily entering into, and being moved in, the orifice and canal of the uterus. The terminating bulb is about one-eighth of an inch in diameter. The stem is about nine inches in length, and graduated so as to render its employment and some of its indications, with regard to the measurement of the uterus, more precise.

The following is the mode of graduation adopted:—At two inches and a half from the extremity of the instrument, (the measurement being the usual length of the uterine cavity,) there is placed a slight elevation or knob on the convex surface of the stem, which serves to show when it is introduced to the full extent into the interior of the organ, and at the same time forms a fixed or standard point, from which the instrument may be further graduated towards either of its two extremities. The further graduation is marked by shallow grooves, placed at distances of half an inch or an inch from each other.

The uterine sound, as shown by Dr. Simpson, increases to a great degree our power of making a perfect and precise tactile examination of the fundus, body, and neck of the uterus. The previous introduction of the sound facilitates and simplifies the subsequent visual examination of the cervix uteri with the speculum. By its use we may, in many instances of pelvic and hypogastric or abdominal tumours, ascertain the connexion or non-connexion of these tumours with the uterus. It is capable of affording valuable diagnostic information, by enabling us to measure the length of the uterine cavity. These propositions are established by an interesting series of cases and observations by Dr. Simpson.

Fibrous Tumour and Polypus of the Uterus.—M. Lisfranc* maintains the opinion, that we can never discriminate a fibrous tumour of the womb, from simple induration of this organ, unless the former have assumed the character of polypus. In consequence of the impossibility of forming an accurate diagnosis, he recommends that every supposed case of fibrous tumour of the uterus, should be treated as if it were a curable induration of that organ. In such cases, M. Lisfranc first endeavours to dissipate any

* *Clinique Chirurgicale de l'Hôpital de la Pitié*, tome iii.; *British and Foreign Medical Review*, July, 1844.

inflammation or congestion that may be present, by abstinence from local excitement, rest, a non-stimulant regimen, one or more bleedings from the arm to the extent of three or four ounces each, emollient and nearly cold injections into the vagina, laxative enemata, the occasional use of Seltzer water and other mild aperients, and the administration of cicuta, belladonna, and opium, by the mouth or by the rectum, as circumstances may require. When the first indication has been fulfilled, iodine is to be administered in the form of frictions of iodide of lead ointment in the groin, either alone, or conjointly, or alternately with iodide of potassium internally, and sometimes an issue or seton in the region of the uterus or of the ovaries. Unwearied perseverance in the treatment is essential.

When *fibrous tumours* have assumed the character of *polypus*, they are covered by an envelope, which may either be constituted by the mucous membrane of the uterus alone, or the tumour may also be invested by a layer of the proper tissue of the womb, which has been protruded before it in its progress towards or into the vagina, and then the pedicle consists of the proper tissue of the womb. This kind of envelope is not unfrequently perforated or absorbed to a considerable extent. Contrary to the opinion of Cruveilhier, M. Lisfranc maintains that the fibrous polypus may become pedunculated even whilst it is in the womb; in proof of which he advances some cases which have fallen under his observation, and which negative the opinion that the peduncle is formed by the constriction exerted by the neck of the womb. He admits, however, that the pressure of the neck of the womb causes the deep circular depression occasionally met with on polypi, and which, in a superficial examination, might embarrass the diagnosis.

In discussing the differential diagnosis of polypus and inversion of the womb, M. Lisfranc exposes the fallacy of an opinion very generally maintained, that polypus is insensible, whilst an inverted womb is sensible. Dr. Johnson, in the third volume of the *Dublin Hospital Reports*, has related a case in which a polypus was highly sensitive to the touch. M. Lisfranc also has very frequently met with polypi which were painful on pressure. He assigns, as an explanation of the fact, the circumstance of the polypus being covered by a layer of the uterine tissue; but, even in this case, the

lowest part of the tumour may be insensible, on account of the envelope having become thin or perforated. M. Lisfranc suggests the following theory respecting the diagnosis of these affections:—"If," says he, "the symptoms were very serious, and the life of the patient in danger, it would be our duty, could we ascertain the existence of the polypus, to attempt to remove it; would it not be allowable to seize the neck of the uterus with Museaux's forceps, and depress it to the vulva? and if, on then passing the finger into the rectum, the body of the uterus was felt to be considerably enlarged, might we not conclude that we had to deal with a uterine polypus? But if, on the contrary, it was found that the size of the uterus was not increased, that its longitudinal diameter was diminished, would not this indicate that the case was one of inversion?" Guided by these new data, in a case such as is now under consideration, M. Lisfranc succeeded in removing a polypus, and rescued the patient from apparently certain death.

In cases of polypus, in which the patient is so far exhausted by hæmorrhage that the slight loss of blood attendant upon excision, or the application of the ligature, might endanger life, M. Lisfranc tears from the surface of the tumour the vascular membrane, which he supposes usually alone yields the blood. If a polypus completely within the womb is accompanied with uncontrollable hæmorrhage, an operation may appear urgent, but is greatly more difficult and dangerous than when the tumour is in the vagina: in this case, the neck of the uterus is frequently dilated, and M. Lisfranc has taken advantage of this circumstance, in several cases, to apply, with the aid of the speculum, proto-nitrate of mercury to the small accessible portion of the tumour. This practice has almost always succeeded in his hands, especially when repeated twice or thrice within twenty-four hours, or whenever the bleeding returned. He explains the efficacy of this mode of treatment, by saying that the polypus is compressed by the walls of the uterus over its entire surface, except at the point corresponding to the orifice of the uterus, in which situation, consequently, it can alone bleed.

The practice of *enucleation* has been adopted by M. Lisfranc in several cases both of polypi and of fibrous tumours, which were not pedunculated, whether situated completely within the cavity of the womb, or having partly made their way into the vagina. If

the envelope be already perforated, the finger may be insinuated through the opening; if entire, and not of great thickness, it may be lacerated by the finger-nail; enucleation must, however, generally be preceded by an incision. By this mode, M. Lisfranc has removed fibrous tumours whilst still within the cavity of the uterus. In some cases, where the cervix uteri was not sufficiently dilated, he divided it anteriorly. Whenever the peduncle of the tumour is very broad, he recommends that we should incise the envelope, and endeavour to enucleate the tumour; in this, however, we cannot always succeed.

In Mr. Crosse's essay* on "Inversion of the Womb," a highly interesting case is recorded, in which Mr. Godwin Johnson, of Norwich, successfully removed a fibrous tumour of the womb, weighing thirty-two ounces. The tumour projected six inches above the brim of the pelvis, and formed a large convex projection into the vagina, implicating the mouth of the womb. Having been exposed where it was accessible in the vagina, it was in part enucleated; and by successive trials, day after day, more of the tumour was separated, chiefly by the fingers; at length the whole hand entered the uterine cavity, and completed the separation of the tumour, which was removed by traction and the use of suitable instruments. The patient perfectly recovered.

The *ligature*, as a general mode of removing uterine polypi, M. Lisfranc would reject. Exceptions to this rule occur, when the polypus, of moderate size, is entirely included within the womb, or is implanted high up, and the symptoms are of great urgency. In such a case, a ligature, if its application be possible, should be employed; and also when the patient is so exsanguine, that the smallest loss of blood is to be dreaded. If an artery is felt pulsating in the peduncle, M. Lisfranc would, in using the ligature, tighten it so as thoroughly to strangulate the peduncle, then excise the polypus, and eight or ten hours subsequently remove the ligature. Hæmorrhage after excision is but little to be dreaded, as M. Lisfranc, in 165 cases, only encountered it twice.

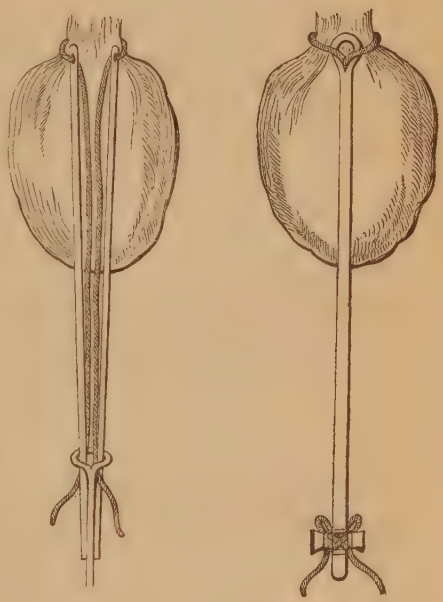
Dr. Oldham† has shown that the action of the uterus, in effecting the descent of those various growths which have been ranked under the name of polypus, sometimes displaces along

* *Transactions of the Provincial Medical and Surgical Association*, vol. xiii.

† *Guy's Hospital Reports*, April, 1844.

with the tumour the wall of the uterus, to which it was attached, thereby producing a partial inversion of the womb. In a case related by Dr. Oldham, the polypus, of the size of a small orange, had no proper pedicle, but it merged insensibly into the inverted portion of the womb. It is obvious that in attempting the use of the ligature in such cases, there would be danger of including within it the inverted portion of the uterus. Hence, in those cases in which the symptoms leading to the suspicion of polypus have long existed,—when the os uteri opens by slow degrees, and with much pain,—when the growth protrudes from it, not suddenly under some muscular effort, but gradually,—and when the tumour feels hard and unyielding,—there is a fair presumption that the short stalk of it may be a portion of the inverted womb, and the ligature ought to be applied as remote from the commencement of the pedicle as circumstances will allow.

Valuable aid would be derived in such a case from the use of the uterine sound of Dr. Simpson; the practice of enucleation adopted by M. Lisfranc would be peculiarly applicable to these cases.



I must refer to the valuable essay of Mr. Crosse* for much additional information relative to inversion of the womb consequent upon the development of fibrous tumours.

A very ingenious instrument has been devised by Dr. Quackenbush,† for the application of the ligature in cases of polypus uteri. It consists of three small rods, one-eighth of an inch in diameter, eight inches in length, and perfectly straight. Two

* *Transactions of the Provincial Medical and Surgical Association*, vol. xiii.

† *American Journal of the Medical Sciences*, January, 1844.

of the rods have each a small hole at one end, large enough to admit the ligature. The other rod has a metallic loop at one end, of sufficient size to allow the first two rods to pass, and at the other end a shoulder, around which the ligature is to be fastened. The mode of application is at once obvious, on referring to the accompanying drawing.

Extirpation of the Uterus—A fatal case of extirpation of the uterus is recorded by Mr. Heath,* of Manchester. The disease was supposed to be ovarian. Mr. Heath and his colleagues, after repeated and careful examinations, decided that the tumour was ovarian, and considered that the patient presented "a fair case for extirpation by the abdominal section."

The prolapsed womb has been successfully extirpated by ligature, in a case related by Dr. Toogood.† In the same manner the inverted womb has been removed, with success, by Dr. Esselman,‡ and by Mr. Crosse.§

Having already trespassed so far upon the forbearance of the Association, I should have hesitated, on this account, to prolong my Address. I must, however, frankly confess that I have also been restrained by another most cogent reason—the inability, from lack of time, to complete one part of the honourable task assigned to me—I allude to the mournful record of those who were.

In vain we look around for some whose wonted presence gladdened and instructed us; and, if we take a wider range, numbers besides our more immediate friends, dear, like them, to humanity and science, have been swept away, their mission ended. As they had theirs, so have we all our special mission. It may be exalted, or it may be lowly; but be that part what it may, it constitutes an essential link in the universal chain which must be sustained.

Let us then cultivate the talent entrusted to our care with energy, knowing whose business we are about; and with humility, feeling how frail we are, and how prone to err.

* *London Medical Gazette*, December 9, 1843.

† *Provincial Medical and Surgical Journal*, 1844, p. 214.

‡ *London Medical Gazette*, July, 1844.

§ *Provincial Medical and Surgical Journal*, 1844, p. 154.

TABLE OF CONTENTS.

MR. TEALE'S ADDRESS IN SURGERY.

I. GENERAL SURGICAL PATHOLOGY.

PAGE

Spontaneous or Sympathetic Gangrene 64
Admision of Air into the Veins 65
Fibrous Tumour 68
Carcinoma 69
Osteoid Tumours 70
Pulsating Tumours of Bone 72

II. GENERAL SURGICAL THERAPEUTICS.

I. TENOTOMY.

(*a.*) In the Treatment of Deformities and Anchylosis 74
(*b.*) In the Treatment of Fractures and Dislocations 75

II. AMPUTATION.

(*a.*) At the Hip-joint 76
(*b.*) Through the Condyles of the Femur ... ... *ib.*
(*c.*) At the Ankle 77
(*d.*) In Carcinomatous Affections of Bone 78

III. EXCISION OF JOINTS, PARTIAL OR COMPLETE.

PAGE

(*a.*) Of the Head of the Femur 79
(*b.*) Of the Elbow-joint ... ... *ib.*

IV. PLASTIC OPERATIONS.

(*a.*) For Contracted Mouth 80
(*b.*) For Restoration of the Cheek ... ... *ib.*
(*c.*) For the Removal of Deformities consequent upon Cicatrices of the Neck ... 81
(*d.*) For Fissure of the Palate 83
(*e.*) For Hare-lip 84
(*f.*) For Restoring the Urethra 85

III. SPECIAL SURGERY.

OF THE BONES.

Equilibrial Treatment of Fractures of the Thigh 86
Ununited Fracture treated by Seton, Acupuncture, and Excision 87

OF THE ARTICULATIONS.

Dislocation of the Sternal Extremity of the Clavicle 87
Dislocation of the Humerus, with Fracture of its Neck ... ... *ib.*
Dislocation of the Tendon of the Long Head of the Biceps 88
Dislocation of the Hip 89
Sub-luxation of the Semilunar Cartilages of the Knee ... ... *ib.*
Dislocation of the Astragalus 90
Dislocation of the Scaphoid Bone and Calcaneum from the Astragalus ... 93
Dislocation of the Metatarsus from the Tarsus 94

OF THE ARTERIES.

Diagnosis of Aneurism 94
Ligature of the Carotid followed by Hemiplegia 96
Aneurism of the Arteria Innominata treated by Distal Ligature of the Carotid 97
Ligature of the Common Iliac Artery ... ... *ib.*
Aneurism treated by Compression 98

OF THE HEAD.

PAGE

Excision of the Upper Jaw 190
Excision of the whole Lower Jaw 101
Immobility of the Lower Jaw successfully treated ... ... *ib.*
Excision of the Tongue—Section of the Lower Jaw 102
Ranula 104

OF THE SPINE.

Fracture of the Spine treated by Extension 104
Paraplegia from Protrusion of the Intervertebral Substance ... ... *ib.*
Spina Bifida 105

OF THE NECK.

Tracheotomy—(*a.*) Foreign Bodies in the Air-passages 105
(*b.*) Chronic Diseases of the Larynx 108
(*c.*) Acute Diseases of the Larynx, or Trachea 109
Œsophagotomy 110
Thyroid Cysts 111

OF THE THORAX.

Paracentesis of the Pleura 111

OF THE ABDOMEN AND PELVIS.

Lumbar Cysts 113
Omental Sacs of Hernia 115
Operation for Strangulated Hernia without opening the Sac 116
Hernia reduced in Mass ... ... *ib.*
Enterotomy of the Small Intestines 117
Lumbar Enterotomy ... ... *ib.*
Paracentesis of the Intestine for Tympanites 119
Intestino-vesical Fistula ... ... *ib.*
Hæmorrhoids treated by Nitric Acid 120
Relaxed Rectum ... ... *ib.*
Fistula in Ano 121
Pelvic Abscess 122
Abscess of the Prostate 123

PAGE

Spermatozoa in the Fluid of Hydrocele 123
Hydrocele treated by Injections of Iodine 125
Hydrocele treated by Bougie ... ... *ib.*
Hydrocele treated by Incision and Seton ... ... *ib.*
Varicocele 126
Late Descent of the Testis 127
Spermatorrhœa ... ... *ib.*
Stricture of the Urethra 128
Supra-pubic Lithotomy ... ... *ib.*
Bilateral Lithotomy 129
Lithotrity ... ... *ib.*
Lithectasy .. .. *ib.*
Utero-vesical Fistula 130
Ovariotomy ... ... *ib.*
Uterine Sound 132
Fibrous Tumour and Polypus of the Uterus 133
Extirpation of the Uterus 138

ON

GRINDERS' ASTHMA.

BY CHARLES FOX FAVELL, M.D.,

Physician to the Infirmary, Sheffield.

It is pretty generally known that the artisans employed in a particular branch of the Sheffield trade, are extremely liable to an interesting but formidable pulmonary affection, which is locally, if not more extensively, known by the name of "grinders' asthma." Two, and only two of the physicians, at any period resident in the town, have made this affection the subject of their contributions to medical literature. The first person who published on the disease so common and so fatal to grinders, was the present Sir Arnold Knight, now of Liverpool, but at that period in extensive practice in Sheffield. The contributions of Dr. Knight appeared in two consecutive numbers of the *North of England Medical and Surgical Journal.* The last individual who has contributed anything on the subject, is Dr. G. C. Holland. The views of the latter gentleman are comprised in a work which he published in the year 1843, entitled *Diseases of the Lungs from Mechanical Causes, and Inquiries into the Condition of Artisans exposed to the Inhalation of Dust.* In a subsequent part of this essay it will be necessary to make more special reference to the statements and opinions of both these writers.

The object which I have peculiarly in view in the present communication, is to determine the pathology of grinders' asthma, or rather, perhaps I should say, to exhibit the lesions of the respiratory organs which morbid anatomy most frequently reveals in the persons of those who have fallen victims to the disease. Before proceeding to this part of the subject, however, there are a few preliminary remarks, to which it will be necessary to direct our attention.

The grinders who carry on their employment in the town constitute, from their mere numbers, a very important class of the community. There are nearly two thousand adult persons who are thus engaged, and, in addition to these, there are some hundreds who work at wheels situated in the immediately surrounding country.

The process of grinding is carried on in distinct buildings, to which the name of *wheels* is given. At some of these establishments, from one hundred to two hundred individuals are employed. The *wheels* are divided into separate apartments, which differ from each other considerably in size, and consequently accommodate different numbers of workmen. The rooms in which the men work are called *hulls*, and each hull contains a number of troughs, (technically called *trows*,) proportionate to its dimensions. The trough is an excavation formed in the floor of the room, in which the stone revolves; and each trough has two or three compartments, commonly called *holes*, in one of which the glazing wheel revolves. The glazing wheels are composed of wood and leather, and vary considerably in size; those on which pen-knives are glazed are generally about fourteen inches in diameter, whilst those employed for table-knives are thirty-six inches in diameter. These wheels, as well as the stones on which the grinding is performed, are attached by broad leather straps, called *wheel-bands*, to a wheel of much larger dimensions, situated at the back part of the room, and known by the technical name of *the drum*. This latter piece of machinery is put in motion by the steam-engine, with which it is connected, and its revolutions cause the wheels and stones which are attached to it to revolve also. The connexion which exists between the wheels and the drum may be effected or discontinued in a very brief space of time, in consequence of the facility with which the wheel-bands are put on and off. When the grinder is at work, he sits on a kind of small bench, to which the name of *the horse* is given; his arms are stretched outward, and the body bent forward.

The stones used by the grinders differ greatly in their qualities, some being hard and brittle, and others being comparatively soft and yielding. The former are used for what is called *dry* grinding, and the latter for *wet* grinding. Both varieties are met with abundantly in this neighbourhood.

It will be obvious, from the remark just made, that the grinders may be divided into two classes,—the wet and the dry; the former carry on their operations on a perfectly dry stone, whilst the latter work on a stone which is constantly kept moist. A large proportion of the workmen, however, are occasionally engaged in both these branches, in consequence of many of the articles requiring to be ground both on the wet and on the dry stone. This is particularly the case with scissors, razors, and pen-knives; table-knives, also, although chiefly ground on a wet stone, have what are called the *bolsters* ground on a dry one.

The dust which arises from the operation of grinding, especially where much of the dry variety is practised, is very considerable in quantity. What influence this has in the pulmonary affection to which allusion has already been made, is an inquiry which must be reserved for a subsequent part of this communication.

It is not, however, only during the process of grinding that large volumes of dust arise, but also during *racing* and *glazing*. The term racing is applied to the process by which the stone is rendered perfectly true. A man stands before it with a bar of steel, and whilst the stone is rapidly revolving, applies the bar in such a manner as to ensure the entire surface of the stone being uniformly smooth and level. Glazing is the last process, which is carried on at the wheel, and is the means by which a *polish* is given to the articles which have been ground. The *glaze* employed in giving the polish to different articles, is not always the same. In glazing forks, emery and glue are the only substances employed; for pen-knives, oil and emery are mixed together, and the leather which encircles the wheel is also smeared over with bees-wax. The glaze for table-knives is composed of suet, bees-wax, and emery, with which what is termed the *glazer* is anointed. The same person both grinds and glazes. It is obvious that the quantity of dust arising from the process of glazing must vary according to the composition of the glaze employed: that used in glazing forks will occasion much the largest quantity.

A few particulars respecting the statistics of grinders shall complete these preliminary observations. For most of the facts connected with this branch of my subject, I gladly acknowledge my obligations to the elaborate work of Dr. Holland. It has previously been remarked, that Dr. Holland's observations were

published in the year 1843; the following numbers, therefore, have reference to that period. Some slight alterations in several of the departments, I am aware, have subsequently occurred, but they are not of sufficient extent to invalidate the general accuracy of Dr. Holland's tables.

1. *Fork Grinders.*—The persons engaged in this branch, work entirely on a dry stone. The number of adults employed is ninety-seven. There are only nineteen of these who are forty years of age or upwards, and only three who are fifty. Ten of the nineteen either began working at the trade late in life, or were for some years absent from it after they had once commenced. The destructive nature of this occupation will further appear by noticing the ages at which the vast majority die. In a period of five years there are twenty deaths recorded, and of these, seventeen are under thirty-five years of age. Again, there are sixty-one deaths recorded as having occurred in fifteen years,—from 1825 to 1840,—and of these, forty-four (more than two-thirds) were under thirty-five years of age, and only one solitary individual attained the age of forty-eight. A comparison of the ages at which an equal number of deaths occur, either in other trades, or more particularly amongst those who are employed in agriculture, would render the injurious tendency of the occupation at present under consideration, still more striking.

2. *Scissor Grinders.*—Scissor-grinding is one of the mixed varieties of grinding, being partly effected on a dry stone and partly on a wet one. The process of what is technically called *humping*, for example, or giving the rounded form to the blade of the scissor, is always performed on the dry stone. Those who are engaged in this branch of trade, however, work much more on wet than on dry stones; but we shall find that there are some striking differences in the statistics, as compared with wet grinders, to which it is important to attend. In the class of scissor-grinders there are 213 adults, of whom 161 are under forty years of age. Between the years 1830 and 1843, (thirteen years,) 102 individuals engaged in this department of trade, died; forty-one of these were under thirty-six years of age, whilst sixty-one died between the ages of thirty-six and sixty-five. The greatest mortality, amounting to more than a fourth of the whole, occurred

between the ages of thirty-six and forty. In the fork-grinders, more than two-thirds of the recorded deaths occurred before the age of thirty-five.

3. *Razor Grinders.*—This branch of trade is partly wet and partly dry. The process of what is called *shaping,* or giving the peculiar curve to the blade, is effected on a dry stone. The back and tang, or small end of the razor, are also ground on a dry stone; all the rest is done on a wet one. There are 275 adults employed in razor-grinding, of whom it is stated that 154 are under thirty-one years of age, and only twenty are above the age of forty-five. The number of deaths recorded, from 1822 to 1841 inclusively, amounts to 182; and on examining the ages at which the deaths took place, we find that ninety-nine (more than one half) occurred between the ages of twenty-one and thirty-six; sixty-two occurred between the ages of thirty-six and forty-five, being a total of 161; and, consequently, only twenty-one of these 182 individuals attained the age of forty-six. This mortality very greatly exceeds the average mortality of artisans employed in Sheffield.

4. *Pen-knife Grinders.*—Pen-knives are ground on both wet and dry stones, and the mortality amongst the workmen is considerable. The number of adults employed in this branch of trade amounts to 319, of whom 264 are under forty-one years of age. There are 167 deaths recorded as having occurred between the years 1832 and 1843, and of these, forty-one (nearly two-thirds) were under thirty-six years of age.

5. *Table-knife Grinders.*—Table-knives are almost entirely ground on a wet stone. This branch of trade is very extensively pursued in the country, but there are 282 adults employed in it in the town. Between the years 1835 and 1843, fifty-two deaths are recorded amongst the table-knife grinders employed in the town; fifteen of these occurred between the ages of twenty-one and thirty-six. The average duration of life, therefore, is much greater amongst the persons engaged in this branch of trade than in those employed in the departments previously mentioned.

6. *File Grinders.*—The grinding of files is done entirely on a wet stone. There are 150 adults employed in it. The number of

deaths recorded in thirteen years only amounts to twenty-four, but of these eighteen were under forty-one years of age.

7. *Saw Grinders.*—Persons engaged in this department use only the wet stone. There are ninety-six adults employed in saw-grinding, of whom a very large proportion are upwards of forty years of age. There are only forty-two deaths recorded as having occurred between the years 1821 and 1843; and of these only six were under thirty-six years of age, whilst twenty were upwards of fifty years old.

8. *Scythe Grinders.*—It appears that there are thirty persons employed in grinding scythes, and they use only the wet stone. There are twenty deaths recorded as having occurred within fifteen years; of this number only three were under forty-one years of age, whilst twelve were between forty-six and sixty.

It will appear from the foregoing tables that the mortality varies considerably in the different branches of grinding. The cause of this variation will be more particularly investigated in a subsequent part of this paper. At present I shall only further remark, that although the difference in the mortality may fairly be regarded as indicative of the comparative unhealthiness of the several departments of the trade, it is nevertheless important that we should avoid falling into the serious error of attributing all the deaths which are recorded, to the disease which is the subject of our present observations.

Grinders are, of course, liable to the same kind of diseases, both acute and chronic, as other people. The habits of intemperance in which a large proportion of them indulge, also give rise to a class of diseases which materially shorten the average duration of life. They are exposed, moreover, to injuries of a very formidable character, from the sudden breaking of the stones on which they are working, as well as from other parts of the complicated machinery with which they have to do. These ordinary and extraordinary causes of death must be subtracted from the total mortality before we can determine the precise amount of those who perish from the pulmonary affection under consideration. The consequence of these reductions would be materially to lessen

the numbers in those statistical tables, which have caused so much surprise, not to say consternation, amongst all classes of society.

But it is time to pass on to inquire more particularly into the nature of the pulmonary affection to which grinders are liable; and in doing this, I propose briefly to investigate the following topics:—

I. The symptoms of the disease.
II. The causes from which they arise.
III. The organic changes with which they are connected.

I. SYMPTOMS.

In giving an account of the spmptoms of this disease, it may be expedient, first, briefly to notice the statements of previous writers; and, secondly, to adduce a few illustrative cases. It is obvious that we must consider the symptoms as general and special, some of which may be ascertained by the ordinary means of superficial inquiry, whilst others can only be determined by an accurate physical examination.

In the second paper contributed by Dr. Knight to the *North of England Medical and Surgical Journal*, he remarks as follows:—"Grinders who have good constitutions seldom experience much inconvenience from their trade till they arrive at about twenty years of age. About that time the symptoms of their peculiar complaint begin to steal upon them; their breathing becomes more than usually embarrassed on slight exertion, particularly on going up stairs or ascending a hill, and their shoulders are elevated, in order to relieve their constant and increasing dyspnœa. * * * * Their complexions assume a dirty muddy appearance; their countenance indicates anxiety; they complain of a sense of tightness across the chest; their voice is rough and hoarse; their cough loud, and as if the air were driven through wooden tubes; they occasionally expectorate considerable quantities of dust sometimes mixed up with mucus. Hæmoptysis frequently occurs. * * * * The expectoration is variable, frequently in small quantities, and frothy; in the more advanced stages, copious and purulent. It is sometimes of a dusky red colour, and occasionally extremely fœtid. The pulse in the earlier stages appears sometimes not to correspond with the severity of

the disease, as it then frequently ranges between 80 and 90, when the concourse of other symptoms would lead us to expect that it should beat from 100 to 120. In the advanced stages, as in other cases of pulmonary consumption, it is almost uniformly quick." Dr. Knight afterwards proceeds to give a very graphic description of the advanced stage of the disease as it appears in the *dry grinders*, and remarks that "hæmoptysis, inability to lie down, night sweats, colliquative diarrhœa, extreme emaciation, together with all the usual symptoms of pulmonary consumption, at length carry them off."

On this catalogue of symptoms it is unnecessary to make any remark. The truthfulness of the sketch will be acknowledged by all those who are conversant with the disease.

I pass on to the account which is given by Dr. Holland, who divides the progress of the disease into three distinct stages. The general symptoms which he enumerates in the two first do not materially differ from those which have just been detailed. In the third stage, however, Dr. Holland remarks, that "there is unquestionably greater difficulty of breathing than in ordinary phthisis; a more constantly hacking cough, less emaciation, less tendency to hectic, as well as an aphthous condition of the mouth; diarrhœa is also a less frequent attendant."*

Here, then, the statements of the two writers are, to some extent, opposed to each other, and it becomes a delicate matter to decide between them. In some cases, the peculiarities to which Dr. Holland refers doubtless exist; but it will admit of question whether they constitute a ground of distinction between ordinary phthisis and grinders' asthma. We know very well that the symptoms by which tubercular phthisis are distinguished differ in different cases, partly in consequence of individual idiosyncrasies, partly in consequence of the extent of pulmonary tissue involved in the disease, and partly in consequence of the existence of other lesions, which complicate the pulmonary affection.

Thus we know, that whilst in some cases of ordinary tubercular phthisis the cough is comparatively slight and trifling, in others it is constant and distressing. The dyspnœa, also, in some cases, is by no means an urgent symptom; but in others, where the destruction of the pulmonary substance is much more considerable,

* *Diseases of the Lungs, from Mechanical Causes*, p. 23.

the difficulty of breathing is extreme; and with respect to the existence of aphthæ and diarrhœa in ordinary phthisis, it is almost unnecessary to remark that a large proportion of patients pass through the disease without suffering from the former, whilst the latter varies both in severity and duration in almost every case.

Such statements as those under consideration should be made with extreme caution, since they can only be established by a careful and accurate analysis of an immense number of both descriptions of cases.

I pass over without remark what Dr. Holland calls "an important classification" of the cases in the last stage of the disease, because an accurate examination of the two classes, as detailed by the author himself, will show that they differ only in degree; that the prominent symptoms are essentially the same; and that "in both classes tubercles are found in the lungs."*

But I must notice the account which Dr. Holland gives of the physical signs of grinders' asthma. At page 23 of the work already quoted, he remarks, "the chest generally sounds well on percussion;" and then immediately qualifies this remark by adding "*far better than would be anticipated from the pulmonary affection.*" He goes on to observe, that "the respiratory murmur is heard in its normal state over few points of the chest. Even where it departs the least from this condition of health," he remarks, "it is puerile. It is generally, however, bronchial in its character, conveying the impression that the respiration is principally carried on through enlarged bronchial ramifications." At page 27 he again returns to this subject; but instead of saying that "the sound on percussion is far better than would be anticipated from the pulmonary affection," he says, "We have no hesitation in stating that the sound is frequently much louder than in health." Dr. Holland further remarks, that "on applying the ear or stethoscope to the chest, the respiration is extremely loud and bronchial in its character; the ordinary sounds of inspiration and expiration are sometimes not heard, or very indistinctly; and this peculiarity of the respiration is often detected, in various degrees, throughout both lungs, and when once heard, the peculiarity of it cannot be mistaken."

Now, whether what Dr. Holland calls "this peculiarity" has reference to the bronchial breathing, or to the extreme feebleness

* *Diseases of the Lungs, from Mechanical Causes*, p. 25.

and occasional absence of the normal vesicular respiratory murmur, does not very clearly appear, although from the construction of the sentence I am inclined to believe the latter to be the case. If this surmise be correct, then the statement merely amounts to this,—that different portions of the lungs are so altered in their structure as to be incapable of undergoing complete expansion, during the process of inspiration. It will be important to keep these alleged physical signs carefully in mind, when we come to inquire more particularly into the pathology of the disease. In the mean time, as illustrating the symptoms, both general and physical, of this interesting pulmonary affection, I will briefly relate the particulars of a few of the cases which have fallen under my own observation.

James Pryor, aged forty-six, spring-knife grinder, has worked for a long time amongst razor-grinders, but for the last four months has not been able to work, in consequence of ill health. He states that he was forty years of age before he began to suffer from cough or difficulty of breathing, but that since that time he has had two attacks of pleurisy. For twelve months past he has been out of health, suffering from cough and dyspnœa, which have gradually increased. Expectoration very considerable, of a yellow colour, sometimes rather black, and occasionally bloody. Says that his father was a scissor-grinder, and died of consumption at the age of thirty-four; his mother is now living, and no other member of his family has suffered from consumption. *Physical signs.*—Chest rather flat; the upper portion of the left side does not rise so well during inspiration, as the right. Percussion gives a dull sound immediately below and along the course of the left clavicle. On the right side, also, percussion, in the same situation, gives a less clear sound than natural, although not so dull as on the left. Respiration feeble under both clavicles, but most so under the left, where it is muco-crepitant. Inferiorly and posteriorly, the respiration natural.

William Hallowell, aged twenty, pen-blade grinder, was admitted into the Infirmary, February 4, 1843. His illness commenced nine months previously, with general weakness, shortness of breath, and pain in the left side. Six weeks before his admission, he was suddenly seized with severe hæmoptysis whilst walking in the street. This

continued in a mitigated degree for three days. On admission, he complained of cough and difficulty of breathing; expectoration copious, and of a greenish colour. Functions of the chylopoietic viscera healthily performed. *Physical signs.*—Chest well developed; right side moves more freely than the left during respiration. Percussion yields a duller sound than natural, beneath the right clavicle; on the left side, the sound on percussion is universally dull, except between the second and third ribs, where it is amphoric. In the subclavicular region, on the right side, the inspiration and expiration are both louder and rougher than natural; in the inferior portion of the same lung, the respiration is feeble. Immediately beneath the left clavicle, the respiratory murmur is inaudible, but between the second and third ribs, on the same side, the respiration is cavernous—there is slight gurgling and distinct pectoriloquy.

John Hobson, aged forty-two, table-knife grinder, was apprenticed to a person as a grinder when he was twelve years of age. Has been very steady, and never off work for any length of time, till about twelve months ago, when he suffered from fistula. At the same time he first began to be troubled with cough and difficulty of breathing. His father died of consumption at the age of sixty-two, and his mother died at forty-two, after having been ill for seven years, with cough, &c. *Physical signs.*—Percussion on the right side affords a dull sound, especially at the acromial extremity of the clavicle. On the left side, the sound on percussion is normal. Respiratory murmur on the right side very feeble, particularly at the upper portion; on a deep inspiration, rough and muco-crepitant. On the left side, the respiration is feeble, but more distinct than on the right.

George Hobson, aged seventeen, table-knife grinder, son to the before-mentioned John Hobson, commenced his apprenticeship when he was thirteen years old. He had not been at work more than a few months, when he became affected with cough and difficulty of breathing, but continued at his employment till the period of his admission into the Infirmary. (February 4, 1843.) At the time of his admission, he was suffering from pain in the abdomen, increased by slight pressure, and hoarseness. On

examining the chest, there was dulness on percussion beneath the clavicle, on the right side; the inspiratory murmur was feeble, and the expiration was very loud and prolonged, and the beat of the heart was very distinctly audible beneath the right clavicle. Expectoration was yellow, and small in quantity. No pain in the throat. At the end of a few weeks, the following note was taken of his case:—Slight percussion beneath the right clavicle yields a dull sound, but if the percussion be more forcible, amphoric resonance is distinctly heard. Respiration cavernous, both above and beneath the clavicle. On the left side, respiration puerile, and sound on percussion clear.

Joseph Broadhead, aged forty-one, fork-grinder, commenced his apprenticeship at seven years of age, and has been engaged in the trade ever since. Has always worked in the town, except for twelve months, when he worked at Dronfield, a village six miles from Sheffield. Was never off work, except when as one of the militia, he was for three weeks at Pontefract, and a month at Doncaster. Three or four years ago, also, he was for ten months out of employment. Some years since, he was very dissipated, and frequently absent from work for three or four days in a week. He has never had more than two attacks of illness before the present seizure. The first was in 1832, when he was seized with pain in the side, attended with cough, for which he was bled and blistered. He returned to work again in a fortnight. The breathing, however, has never been completely free since that time. About four years afterwards, he suffered much from difficulty of breathing, for which he was again bled and blistered; and returned to work in three weeks. In July, 1840, he was admitted into the Infirmary, and stated that, six weeks previously, he took cold, and again became affected with cough and difficulty of breathing. Expectoration copious, and of a yellow colour; says it has never been bloody. *Physical examination.*—The chest has a somewhat rounded appearance. The ribs on the left side rise more during inspiration than those on the right. Percussion yields a duller sound on the right side than on the left. Respiration throughout the right side was extremely feeble; beneath the clavicle, bronchial; posteriorly, respiration feeble in both lungs, but most in the right.

Benjamin Wild, aged forty-two, edge-tool grinder, commenced his apprenticeship when nine years of age. When he was seven years old, he several times spit blood, but during his apprenticeship he neither suffered from cough, hæmoptysis, nor any other complaint. He continued to enjoy good health till about ten years ago, when he had an attack of influenza, and has never been free from slight oppression at the chest and cough, since. Three years ago he had an attack of inflammation of the lungs, and another last year. Since the last attack, the cough and dyspnœa have been considerably increased. Expectorates a large quantity of darkish coloured phlegm. *Physical signs.*—Chest rather flatter at the superior portion of the right side than on the left, and does not rise so perfectly during inspiration. Percussion below the clavicle, on the right side, gives a duller sound than natural. In the same situation the respiration is tubular, and the expiration more prolonged and louder than natural; bronchophony is also distinct. On the left side, respiration rather louder and rougher than natural; in other respects it is healthy. Posteriorly, respiration normal in each lung, except in the right supra-scapular region, where it is very feeble.

Samuel Dyson, aged fourteen, table-knife grinder, was put apprentice to his father, who is employed in the same occupation, when nine years of age, and for a period of two years was chiefly employed in grinding bolsters on a dry stone, and has subsequently been occupied in glazing. He enjoyed good health till Christmas, 1844, when he began to suffer from what his friends called bilious complaints, and very shortly afterwards begun to cough, which last symptom has continued up to the present time. (May 16, 1845.) He expectorates a considerable quantity of thick yellow phlegm, which at first, he says, came away in hard lumps; never expectorated any blood. Slight dyspnœa, especially on walking up hill. *Physical signs.*—The infra-clavicular region on the right side somewhat flattened. The right side of the chest rises through a smaller space than the left during inspiration. Slight dulness on percussion beneath the right clavicle. No difference in vocal resonance is perceived when the hand is placed on each side of the chest. Inspiration on the right side, especially beneath the clavicle, feeble and rough; expiration much prolonged. Bronchophony.

Respiration on the left side normal. The parents of this youth are both living and healthy.

Now here I must remark, that the foregoing cases have not been selected for the purpose of illustrating the peculiar views which I entertain on the pathology of grinders' asthma; they have been taken promiscuously from a number of cases, the particulars of which I have in my possession, and were most of them noted down two or three years ago. It is obvious, however, that they do not bear out the general statement which Dr. Holland has made in reference to the physical signs of grinders' asthma—a statement in support of which he does not adduce the particulars of even one solitary case. More or less imperfectness of expansion of some portion of the chest, an abnormal amount of dulness on percussion, the substitution of the tubular for the vesicular murmur, and the occasional existence of amphoric resonance, cavernous respiration, and pectoriloquy, are the most remarkable signs which were observed. How far these signs might be anticipated from the organic changes which are most frequently observed in the lungs after death, will appear when we come to the third part of the present inquiry.

The statement of Dr. Knight, respecting the period of life at which grinders generally begin to suffer from pulmonary symptoms—about twenty years of age—is, I believe, generally correct; and it will be observed that three out of the seven cases which have just been detailed, were under twenty-one years of age. I may further remark, that although at an earlier period they rarely suffer from any formidable pulmonary mischief, or are compelled to seek for medical assistance, many of them will, nevertheless, when questioned on the subject, admit that even during their apprenticeship they were subject to slight cough and oppression at the chest.

This circumstance will not excite much surprise when it is recollected that boys generally commence the trade at from nine to twelve or thirteen years of age, and that they are first employed in dry grinding. Amongst the table-knife grinders the grinding of bolsters, and amongst the scissor-grinders the process of humping, both of which have previously been explained, is confined to the apprentices. I have only further to observe in reference to this

part of the subject, that in some cases the pectoral symptoms continue for years, and very gradually increase in severity, whilst in others they run their course with great rapidity.

II. CAUSES.

In determining the causes of grinders' asthma, there are several particulars to be taken into account. The four following especially demand a brief investigation, namely,—*the habits of the grinder—the exposure to which he is subjected—the position in which he works—and the atmosphere which he breathes.*

1. *Habits.*—The moral status of the grinders, as a body, is unhappily very low; and Dr. Holland is doubtless correct, when he remarks that "the more desperate the branch, the more ignorant, reckless, and dissipated are the workmen." Many of them, indeed, adopt as their maxim, *a merry life and a short one,* and most fearfully does their general conduct accord with the destructive principle they have adopted. Sensual gratification is the great object they have in view, and they are regardless of the cost at which it can be obtained. The moral sense is not blunted merely, but obliterated; the decencies of society are violated, and the laws of God despised. Drunkenness is a very prevalent vice amongst them; and in many instances the grinder will spend nearly his whole time at the public-house for days together, and during that period will scarcely ever be sober. I need scarcely remark, that the necessary consequence of such habits is, that the general health is destroyed, and, therefore, the system is rendered unable effectually to resist the injurious tendency of those other morbid influences to which the grinder is almost daily exposed.

2. *The exposure to which he is subjected.*—The grinder often works without coat or waistcoat, and always with the chest freely exposed. In this state he frequently leaves his work-room, and goes into the external air; this he does during the severest days of an inclement winter. Again, a large proportion of this class of workmen, as has been already observed, are *wet grinders, i. e.,* they use a wet stone, and are, consequently, themselves exposed to the

influence of dampness and moisture. The chilling effect which is thus produced on the cutaneous surface, must obviously be prejudicial; the balance of the circulation must be destroyed; and hence we find that the grinder becomes subject to a great variety of diseases: rheumatism, pleurisy, pneumonia, affections of the heart, and inflammatory affections of the abdominal viscera, are amongst the most frequent.

3. *The position in which he works.*—When the grinder is at work, he sits on what is technically called his *horse,* astride a low fixed bench, immediately behind the stone, with his body bent forward over the stone on which he is working, his face, in many departments, being removed but a few inches from it. The degree of inclination varies, however, in different branches of the trade; hence we are informed that "the smaller the article, the more inclined is the body over the stone; and the more elaborate the workmanship bestowed upon it, the less frequently is this position relieved."*

Now, it is obvious that the posture which has been described is unfavourable to the free action of the chest; and it is equally obvious that just in proportion as the motions of the chest are restrained, the circulation through the lungs will be impeded, and pulmonary congestion will result. And what will be the effect of long continued or repeated congestion of the pulmonary vessels? Doubtless there will be a loss of tonic contractility, and the consequent escape of some portion of the contents of the vessels into the pulmonary tissue, constituting, according to individual idiosyncrasies, euplastic, cacoplastic, or aplastic deposits. It is notorious that many chronic diseases of a formidable nature first become apparent when the powers of the system are unusually debilitated; hence the frequency with which phthisis follows influenza, sometimes after very considerable intervals; and hence, also, the frequency with which scrofula in different parts succeeds any means by which the tone of the system has been impoverished. In these cases, doubtless the first change is effected upon the chemical constitution of the blood, and the tonicity of the vessels becomes impaired afterwards; the vessels permit deposits to take place, and then a series of organic changes, varying in different

* *Diseases of the Lungs from Mechanical Causes*, p. 84.

cases, occur. In connexion with the remarks just made, it is important to bear in mind the general habits of the grinders.

4. *The atmosphere which he breathes.*—The process of dry grinding necessarily deteriorates the atmosphere of the room in which the workmen are employed, inasmuch as it occasions the evolution of large quantities of dust, consisting of minute particles of stone and metal. In wet grinding the quantity of dust occasioned is much less, and consists almost entirely of metallic particles. The two varieties of grinding, however, are frequently carried on in the same room.

The deteriorated condition of the atmosphere has, perhaps, been regarded too exclusively as the cause of the great mortality of the grinders, whilst too little attention has been paid to the three circumstances previously noticed. There is reason to believe, however, that although the vitiated state of the atmosphere is not to be regarded as the sole cause of the pulmonary affection to which the grinder so often falls a victim, it is, nevertheless, a very important link in the chain of causes. The following brief considerations will establish this:—

(*a.*) *The breathing of an atmosphere impregnated with dust is capable of producing pulmonary diseases.*—In illustration of the truth of this proposition, I may mention that *maltsters* are very liable to affections of the lungs. Chronic bronchitis and phthisis are very common affections amongst persons thus employed. The atmosphere which the workmen breathe is often impregnated with large quantities of dust. *Leather-dressers* also suffer from similar affections. Thus Dr. Hastings, in his treatise on *Inflammation of the Mucous Membrane of the Lungs,* remarks, "Chronic bronchitis is sometimes the result of irritating substances acting on the mucous membrane. Besides the contamination of the air by gaseous substances," he observes, "it is occasionally loaded with impurities, which may act mechanically on the delicate texture of the mucous membrane. The effect of these is generally a disease of a chronic nature." "In this town," he subsequently remarks, "the preparers of yellow leather, and those employed in some parts of the china manufactory, are often subject to severe attacks; they are exposed during some part of the process," he proceeds to observe, "to inhale an air loaded with dust, which produces

inflammation of the bronchial membrane, of a chronic nature. Dyspnœa is generally the primary symptom, which is often neglected for many months. If the occupation, under these circumstances, be continued, the disease is aggravated; the patient is not unfrequently seized with hæmoptysis, which is occasionally very profuse, and which is accompanied with a great increase of dyspnœa and severe cough." Dr. Hastings afterwards gives an account of the *post-mortem* appearances which were observed in three of his cases.*

It is notorious, also, that flax-dressers, who likewise often breathe an atmosphere impregnated with foreign ingredients, suffer greatly from pulmonary complaints. And, once more, stone-masons and persons engaged in the dressing of stone, are peculiarly liable to similar affections. I have recently had several of this class of workmen, suffering from organic disease of the lungs, under my own care. On this subject, the following observations of Dr. Alison are well worthy attention:—

"Another fact," says he, "which still more clearly demonstrates the effect of repeated irritation of the lungs in producing, even in constitutions which are not predisposed to it, that modification of phthisis which occurs in middle and advancd life, is the well-known unusual frequency of the disease in those workmen who are much exposed to irritation of the lungs, particularly such as are in the constant habit of inhaling various fine powders into the lungs: in coal-heavers, dressers of flax and feathers, needle-grinders; in the workmen in the mill-stone quarries of Waldshut, and in the stone-masons in this country. I have witnessed," he proceeds to observe, "many melancholy examples of the disease among the latter class, at the age of forty or more, and in well-made men of apparently

* In the first case, "no tubercles were found in the lungs, but their substance was rather more solid than usual. The mucous membrane lining the bronchia was much inflamed and thickened, and several extensive superficial ulcers were found upon it. The bronchia were filled with a purulent fluid, mixed with blood." In the second case, "the lungs were strongly adherent over their whole surface to the pleura costalis. The mucous membrane of the trachea and bronchia was highly inflamed and ulcerated. The air-cells were filled with mucus, mixed with pus. The substance of the lungs was much gorged with blood; no tubercles or vomicæ were discovered." In the third case, "many tubercles were found in the substance of the lungs, some of which had suppurated. The bronchial membrane was thickened and ulcerated, and bore marks of having been long inflamed."—*Treatise on Inflammation of the Mucous Membrane of the Lungs*, pp. 336–342.

vigorous constitution. I have reason to believe," he adds, "that there is hardly an instance of a mason, regularly employed in hewing stones in Edinburgh, living free from phthisical symptoms to the age of fifty."*

(*b.*) *The prejudicial effects which result from inhaling an impure atmosphere, cæteris paribus, bear a direct proportion to the period during which it is breathed.*—A few facts relating to the Sheffield grinders will be sufficient to corroborate this statement. "Grinders' asthma," Dr. Knight remarks, "as it exists amongst the Sheffield grinders, is a disease of recent origin." The reason of this will be obvious from the following considerations:—

First. Grinding was not originally a distinct branch of business; those who were engaged in it had a large portion of their time occupied by other employments, and therefore they were not exposed for so long a period to the noxious influences which are connected with this branch of trade.

Secondly. Until the year 1786, the process of grinding was entirely carried on in the adjacent country, at distances varying from two to four or five miles from the town; the rooms also in which the men worked were more lofty, better ventilated, and contained a much smaller number of stones.

Thirdly. All grinding wheels were formerly built on the banks of rivers, and water was the power employed to put the machinery in motion. When this was the case, the hours of labour were necessarily limited by the supply of water, which was sometimes very scanty; and during long seasons of drought, which occasionally occurred, a complete cessation from grinding was inevitable.

So long as this state of things continued, grinders' asthma was unknown. But after a while, a mighty revolution was effected in the condition of the grinder. The genius of commerce shook her wand over him, and fearful was the change which she induced: the grinder was no longer employed in other occupations, such as forging and hafting, but devoted solely to his own department. The wheels ceased to be erected on the banks of the streams which flow along our beautiful valleys; or to consist of a single room, in which only few persons were engaged, and admirably ventilated, if not by the elaborate work of science, at least by the dictates of

* *Transactions of the Medico-Chirurgical Society of Edinburgh*, p. 373.

common sense. On the contrary, large buildings were erected in the lowest part of the town; the different floors were thronged by numerous workmen engaged in various departments of the same trade, and the ventilation of each room was miserably imperfect. And once more, the grinder was, unhappily, rendered independent of the supply of water: the agency of steam was substituted, and thus he was deprived of those periods of recreation which were so intimately connected with the preservation of his health. In consequence of these changes, the grinder was necessarily exposed for a much longer period to the influence of a vitiated atmosphere, as well as to some of those other evils which have previously been considered.

In further illustration of the prejudicial effects of the atmosphere to which the grinder is exposed, two other considerations must be suggested:—

First. The brief statistical tables which have already been adduced, show that the rate of mortality is much greater amongst the dry grinders than amongst those who work with a wet stone. Amongst the fork-grinders, for example, we have seen that the mortality is much greater than it is amongst the saw-grinders. This, doubtless, is partly to be attributed to the difference of the atmosphere which they respectively breathe.

Secondly. The contrivances which have been effected for removing the grinder from the influence of dust are beneficial, in proportion as they effect the object they have in view. Two contrivances deserve especial notice: one which was brought forward by our scientific townsman, Mr. Abraham, and the other, the ingenious invention of Mr. John Elliot, which has subsequently undergone important improvements. The chief object of the former was to remove the metallic particles which arise during the process of dry grinding, by the suitable arrangement of a series of magnets; the object of the latter was to carry away the entire quantity of dust by means of a flue.*

Before leaving this division of the subject, there is one more

* These flues are carried to the outside of the building; their beneficial operation is much increased by the dust-fans with which some of them are furnished. The fan is easily put in motion by means of a strap, which is connected with the revolving wheel.

topic which requires a momentary consideration, and that is the comparative influence of the particles of stone and metal in the production of pulmonary disease.

In Dr. Hodgkin's admirable lectures on the morbid anatomy of mucous membranes, we meet with the following observations:—"The deleterious and even fatal effects of the mechanical irritation of the lungs, by the inhalation of floating particles, is exhibited on a large scale in the prevalence of what is called the 'grinders' rot' amongst the workmen at Sheffield, and the needle-makers in Worcestershire. It appears that the fine particles of steel," he proceeds, "contribute more than those of the stone to produce this effect; since a friend of mine, the late Hall Overend, of Sheffield, discovered that a powerful magnet, so placed as to intercept the steel dust and divert it from the lungs of the operator, was productive of the most beneficial result."* The phraseology here is peculiar—"the most beneficial result." Now I apprehend we are not to understand by this phrase that any comparison had been instituted as to the relative evils resulting from each kind of dust, but merely that the application of magnets so as effectually to intercept the metallic particles—a plan originally suggested by Mr. Abraham—is attended with *a very beneficial result.* The reason of this is obvious, because the total amount of dust produced by the grinding is lessened, in the ratio of the quantity which attaches itself to the magnets. The atmosphere is prejudicial, in proportion to the quantity of dust existing in it, and therefore, by whatever means this quantity is reduced, a beneficial result follows. But, further, it is the mechanical construction of the particles, and not their chemical constitution, that occasions the injurious consequences under consideration. The observations which have already been made in reference to leather-dressers and stone-cutters might be adduced in proof of the truth of this assertion; but it will be still more satisfactory to appeal to the evidence which is afforded by an examination of the grinders themselves. And here it must be remarked, that although calcareous matter has frequently been found in the bronchial glands and tubes after death, there is no instance on record of any particle of iron or steel having been detected. Thus, in a *post-mortem*

* *Lectures on the Morbid Anatomy of the Serous and Mucous Membranes*, vol. ii., p. 213.

examination which I witnessed a few years ago, with Mr. Gillot, a very intelligent surgeon of this town, we found a considerable quantity of deposit rich in calcareous matter, but containing not a single particle of metal. I have frequently noticed the same thing subsequently. The following example I extract from the essay of Dr. Knight:—"A quantity of dust found in the lungs of a person who had died of grinders' asthma was submitted to a chemical examination; no iron could be detected; but there can be no doubt that the dust inhaled had consisted of fine particles of iron as well as stone." He afterwards endeavours to account for the absence of the iron, and concludes in the following words:—"It is probable that the fine particles of stone do more injury to the grinder than the particles of iron."*

Before passing on to the next division of the subject, it may be prudent briefly to recapitulate what has been advanced under the head of "causes." It has been shown that the habits of the grinders are intemperate, and that their dissipation bears a direct proportion to the unhealthiness of the atmosphere in which they work; that whilst working with the chest and arms bare, the grinder is frequently exposed to the action of moisture and alternations of temperature; that the position in which he works prevents the free action of the chest during respiration, and therefore predisposes to pulmonary congestion; that the atmosphere which he breathes is often loaded with mechanical particles; and that he is very liable to a variety of inflammatory diseases.

We are now prepared to enter on the investigation of the third branch of our subject.

III. THE ORGANIC CHANGES IN CONNEXION WITH WHICH THE SYMPTOMS OF GRINDERS' ASTHMA OCCUR.

The most convenient course to be adopted under this division of my subject will be—

1st. To relate the particulars of several of the *post-mortem* examinations which have fallen under my own observation.

2nd. To draw some inferences from them.

* *North of England Medical and Surgical Journal*, p. 175.

3rd. To examine some of the statements which have previously been published on the subject.

Post-mortem Examinations.—William Hugil, a stout, robust man, aged thirty-five, was apprenticed to a razor-grinder at the age of thirteen. During his apprenticeship he became affected with a hard, dry cough, which never entirely left him. Several years ago he had an attack of pleurisy on the left side, for which he was bled and blistered, and at a subsequent period he suffered from cholera. Except on these occasions he was never confined by illness. For a long time past he has led a very dissipated life; sometimes drank very hard for a week together, but was never absent from work on any account for a longer period. His mother says, that whilst he was in his usual health he occasionally "spit blood;" but she also says that he was subject to epistaxis, and she cannot tell whether the spitting of blood usually happened when there was hæmorrhage from the nose or not. He was suddenly seized with a severe attack of pleuro-pneumonia, which proved fatal in ten days. On examination after death, the chest, as well as the rest of the body, was found well developed. The adhesions between the pleuræ on the right side were easily broken down, and were manifestly of recent origin. The right cavity of the chest contained a few ounces of bloody serum, and the pleura covering the lung on the same side was partially covered with recent lymph. The middle lobe of the right lung, the two inferior thirds of the superior lobe, and nearly the whole of the inferior lobe, were in a state of red hepatization. The upper portion of the inferior lobe was slightly emphysematous, and in the centre of it was a portion, about the size of a hazel nut, which was dark coloured, and offered considerable resistance to the knife. On the left side the pleuræ were very firmly adherent, and it required considerable force to separate them. The left lung was congested, but quite pervious to air, except in a circumscribed portion of the superior lobe, in the centre of which there was a space about two inches long by one inch and a half broad, where the pulmonary tissue was extremely dense, and of a dark grey colour. There was no gritty deposit in any portion of either lung, nor any tubercle. The bronchial glands were neither enlarged nor indurated; the heart was large and flabby, and the pericardium contained a quantity of bloody serum.

Samuel Wiseall, aged forty-two, married, and having six children, a table-knife grinder, was put apprentice to his trade at twelve years of age, but has not worked at it very regularly. For ten years he led a very dissipated life, and was occasionally drinking for two or three days together. About eighteen months before his death, he took cold, and began to suffer from cough and dyspnœa, and the usual symptoms of phthisis.* The body was examined twenty-four hours after death: the emaciation was very great; extensive adhesions of the pleuræ on the right side, some of which were very old, and separated with great difficulty; right lung collapsed, tubercular throughout; a large cavity was situated on the upper lobe, and on the sternal side of it a portion of the pulmonary tissue was very dense; the substance of the lung was considerably injected. The left lung was tubercular throughout, and contained several small cavities, but no masses. The bronchial glands were enlarged, and of a black colour, but not abnormally dense; the lining membrane of the bronchi injected; heart natural.

Isaac Hallam, aged forty-four, married, but without family, a table-knife grinder, commenced his apprenticeship at seven years of age. Has led a dissipated life, and sometimes would be intoxicated for three or four days together. His father died at the age of seventy-two, and did not suffer from any pectoral symptoms; his mother died in child-bed; no member of his family ever died of phthisis. His own complaints commenced about nine months before his death, but since the period of his apprenticeship he had been subject to a cough and stuffing at the chest, which occasioned him most distress during the winter season. The body was examined twenty-eight hours after death: on opening the chest, the pleuræ on each side were found to be firmly adherent, especially at the upper part. The right lung was dark-coloured, and the veins much congested; extensively studded with tubercles throughout, even to the edge of the inferior lobe—some of them softened and in masses, others distinct and hard; a small cavity at the upper portion; some parts of the lung, especially portions of the superior lobe, were very firm, dark-coloured, and shining, when cut; tubercles were largely interspersed in portions of the lung, which were of a bright red colour. The left lung closely resembled the right; it was tubercular throughout, and of a dark colour; no gritty

* His mother died of phthisis.

matter; no emphysema. The smaller divisions of the bronchi rather dilated; lining membrane much injected; bronchial glands enlarged, dark-coloured, and very firm; heart larger than natural; no valvular disease.

William Hardy, aged forty-three, scissor-grinder, commenced his apprenticeship at nine years of age, and continued at the same employment till fourteen weeks before his death. Was for two years affected with fistula in ano. He attributed the commencement of his pectoral symptoms—rather more than six months before his death—to cold; they commenced with hoarseness, cough, and expectoration. Has led a sober life, and been married three times; his first wife died dropsical, the second of phthisis, and the third survives him. His father was a very intemperate man, and died of the effects of drunkenness; his mother suffered considerably from rheumatism, but lived to the age of eighty; he had three brothers, all of whom were grinders, and all are dead—one from drinking, another had fistula, the complaint of the third I could not ascertain; the family history, indeed, is altogether unsatisfactory. The body was examined forty hours after death: when the thorax was opened, the lungs did not collapse; on the left side there was some effusion of dark-coloured fluid; adhesions between the pleuræ, especially at the superior portion of the lung, but not very firm; the lung was tubercular throughout, and a large cavity existed in the posterior portion of the superior lobe; there were no hardened masses. On the right side, the adhesions between the pleuræ were much more extensive than on the left; the right lung, both on its surface and in its internal structure, contained numerous small dense portions, about the size of currants; the lung was very much congested, and all the vessels—arteries, veins, and bronchi—were considerably enlarged; the bronchial glands were enlarged, but not dense, and contained some portions of gritty matter. The lining membrane of the larynx and trachea was intensely injected, and numerous small superficial ulcerations were observed upon it; the heart was larger than natural.

William Taylor, aged thirty-eight, pen-blade grinder, commenced his apprenticeship when nine years of age, and worked at it regularly till about a year before his death, when he was obliged to

relinquish it on account of ill health. Led an intemperate life. For some years suffered more or less from cough, with slight expectoration and dyspnœa. His father died at the age of forty-three, of "brain fever"; his mother died at the age of forty, but he did not know of what complaint. The body was examined twenty-four hours after death: on the right side the pleuræ were adherent, especially at the superior lobe of the lung. In removing the connexion between the pleuræ posteriorly, an abscess was opened, from which a quantity of healthy purulent matter escaped. The abscess extended from the angle of the sixth rib to the middle of the ninth; it communicated with the lung superiorly, but at the inferior portion the pulmonary tissue was entire, and covered by a smooth and shining membrane. The anterior surface of the lung was studded with numerous dark-coloured spots, which in appearance resembled currants; similar spots were observed in the internal structure; they were rather hard to the touch, and afforded some resistance to the knife. The lung was greatly injected with blood, and of a bright red colour, especially where the black spots were most abundant, and not crepitant; emphysema existed at the inferior edge, and to a considerable extent at the under surface of the lower lobe. On the left side, the external aspect of the lung was the same as on the right; at the superior portion of the upper lobe, there was a large hardened mass, about the size of a hen's egg, of a dark colour; it afforded considerable resistance to the knife, and retained the impression of the blade; in the lower lobe there were several smaller masses. The blood-vessels and bronchi were considerably dilated; the bronchial glands enlarged, and of a black colour—some of them were very dense, and others soft and friable; a quantity of calcareous deposit was found in some of them. The larynx was natural; the lining membrane of the trachea injected, the injection increasing as it reached the bifurcation, and very manifest in the smaller divisions of the bronchi. The heart was enlarged; the left ventricle thicker than natural; no valvular disease. Liver granular; kidneys congested.

— Shepherd, a fork-grinder, and under the care of Mr. Thomas, in the Infirmary, on account of scrofulous disease of the knee-joint. The body was examined twenty-four hours after death. Right

side, adhesions between the pleuræ, but not very strong; the lung did not collapse; colour natural; slightly emphysematous at the lower edge of the inferior lobe; in the upper lobe there was a portion which felt hard, and on being cut into, it presented the appearance of circumscribed pulmonary apoplexy; the lower lobe tubercular, the tubercles advancing to softening. On the left side, adhesions between the pleuræ; the lung tubercular throughout, and a large cavity in the upper lobe; bronchial glands somewhat enlarged and streaked.

John Lawrence, aged forty-one, commenced his apprenticeship to a shoe-blade grinder at twelve years of age. He has led a very intemperate and irregular life. He was troubled with cough and expectoration for a long time before death, and for a considerable period was universally anasarcous, the urine being very albuminous and of low specific gravity. The body was examined thirty-six hours after death A quantity of fluid was effused into each cavity of the chest, and the pleura of each lung was adherent to the costal pleura. Each lung presented on the surface many of those small bodies which resemble currants, and the same bodies were also observed in making a section of the lung; the veins all round them were greatly congested, and the surrounding tissue intensely injected, and of a vermilion colour. The right lung contained a hardened mass, about the size of a chesnut, in the posterior part. The smaller divisions of the bronchi were somewhat dilated, and the lining membrane highly injected. The heart was about one-third larger than natural, the parietes thickened, but the valves healthy. The kidneys were of normal size, but granular texture.*

The abnormal appearances furnished by the foregoing cases, may be conveniently classified as follows:—

1. Tubercles.
2. Small bodies resembling currants, disseminated extensively on the surface and throughout the substance of the lungs.

* I have much pleasure in acknowledging my obligations to several of my brethren, more especially to Mr. Gregory, Mr. Porter, and Mr. Gillot, for having politely invited me to be present at the *post-mortem* examination of several grinders. To Mr. Chesman, also, one of the surgeons to the Union, I am much indebted, for the opportunity he has afforded me of examining grinders labouring under pulmonary disease.

3. Large masses found in different portions of the pulmonary tissue.

4. Emphysema.

5. Dilatation of the bronchial tubes.

6. Inflammation of the lining membrane of the bronchi, trachea, and larynx.

7. Adhesion of the pleuræ.

8. Enlargement of the bronchial glands.

9. Enlargement of the heart.

10. A granular condition of the kidneys.

These changes again may be divided into three distinct classes—the primary, the secondary, and the intercurrent, or non-essential. On each of these it will be necessary to make some observations, which will include the second and third divisions of this branch of the subject, and thus terminate our present enquiries.

In making any remarks on these three classes, it will be most convenient to reverse the order in which they have been enumerated.

1. *The intercurrent diseases, or those which have no necessary connexion with the organic changes in the lungs.*—Under this division I shall place only two of the morbid states which have been enumerated—the abnormal condition of the kidneys, and the adhesions of the pleuræ.

(*a.*) *The Kidneys.*—In the case last related, the kidneys were in a state of granular degeneration. Since the occurrence of this case, I have again met with the same lesion in the body of a grinder; and in the case of William Taylor, the particulars of which have been already recorded, it is stated that the kidneys were much congested. The congested condition of the kidneys, I am disposed to consider as the first stage of that morbid action which terminates in granular transformation. The intemperate habits of the grinder, and the exposure to cold and wet to which he is so often subject, would lead us to anticipate his proclivity to renal disease.

(*b.*) *Adhesions between the Pleuræ.*—In every case which has been recorded, adhesions between the pleuræ existed to a greater or less extent. These adhesions were doubtless the consequence of those attacks of pleuritis which so commonly come on during the

progress of pulmonary disease. Into the inquiry respecting the precise connexion which subsists between the pulmonary and pleuritic affection, it is impossible now to enter; but it is proper to remark, that the author of the work entitled "*Diseases of the Lungs from Mechanical Causes,*" a work already repeatedly quoted, *makes adhesions between the pleuræ to constitute an essential difference between grinders' asthma and phthisis.* In order that I may not misrepresent his opinions, I quote his own words.

"The differences in the morbid appearance discovered after death, in the phthisis of grinders and that occurring under ordinary circumstances, have appeared to us to be the following:—Adhesions between the lungs and the pleura costalis are generally observed, and are mostly extensive and firm; which would be anticipated from the great liability of the grinder to inflammatory attacks of the chest, which are often allowed to pursue their course, unchecked by rest, attention to diet, and active remedial measures." (p. 40.)

Now, that these adhesions exist we have already seen, but that they constitute any distinction "between the phthisis of grinders and that occurring under ordinary circumstances," no one who has paid much attention to morbid anatomy can seriously contend. We scarcely ever open the body of a person who has died of phthisis, where these same adhesions do not present themselves. A brief quotation from Louis will be sufficient to establish this:—"No anatomical change," says he, when speaking of the pathological anatomy of phthisis, "was so common as adhesions between the lungs and costal pleuræ; to such a degree that among 112 subjects, I found but one whose lungs were free in every point of their surface."* Adhesion between the pleuræ, then, we may safely conclude does not constitute any difference between the pulmonary disease of grinders and ordinary phthisis.

2. The second class, comprising what I have called secondary affections, will be much more numerous than the one already considered, and will comprehend the state of the heart, bronchial glands, the bronchial tubes, and emphysema.

(*a.*) *The Heart.*—In five of the seven cases recorded, there was enlargement of the heart. Phthisis has sometimes been regarded, but, according to Louis, incorrectly, as a cause of the lesion at

* *Researches on Phthisis;* Sydenham Society edition, p. 35.

present under consideration. This distinguished writer says, that "of 112 individuals cut off by phthisis, three only exhibited any obvious enlargement of the heart."* The difference in the two pulmonary affections in this respect is very remarkable. There are, perhaps, two ways of accounting for the frequency of the complication in grinders. It may be occasioned partly by the intemperate habits of the grinder: the constant stimulus of intoxicating drinks keeps up a degree of unnatural excitement in the circulating system, and the heart becomes over-nourished and enlarged, because it is over-worked. But the position in which the grinder pursues his occupation has also, doubtless, something to do with the enlargement of the heart. The fixed and semi-curved condition of the chest offers some degree of obstacle to the free circulation of the blood through the aorta; and almost daily experience shows us that where any obstruction exists to freedom of circulation through the pectoral portion of this vessel, enlargement of the heart is an almost inevitable consequence.

(*b.*) *Bronchial Glands.*—In the distinction which Dr. Holland draws between "the morbid appearances discovered after death in the phthisis of grinders and that occurring under ordinary circumstances," he mentions the condition of the bronchial glands, and speaks of them as being enlarged or converted "into a black, hard, gritty substance, varying in size from half a marble to a large hazel nut." It will be observed that in four of the cases, the particulars of which have already been detailed, the bronchial glands were enlarged; in two, they contained calcareous matter; in one case, some of the glands were dense and others soft; and in another, it is expressly stated that the glands were not dense. Hence we may state that the *enlargement* of the bronchial glands is a common occurrence, and that the other changes which have been specified are only occasional. That the altered condition of these bodies is the consequence of irritation existing in the pulmonary tissue which surrounds them, is too obvious to require especial proof; but it is important to remember that *the alteration of which we have spoken is not peculiar to grinders.* Thus, when speaking of the state of the bronchial glands in phthisis, Louis remarks—"When thus increased in size, the bronchial glands,

* *Researches on Phthisis;* Sydenham Society edition, p. 48.

unlike those of other parts of the body, exhibit no red discolouration in the spots not filled with tuberculous matter; *far from this, they are of a greyish and blackish colour, and, generally speaking, of firm consistence, and in some cases contain a hard matter, like cretaceous, stony, or osseous substance.*"* Dr. Williams also speaks of the black colour of the bronchial glands, and of the cretaceous deposit within them, as not being uncommon.†

(*c.*) *Dilatation of the Bronchial Tubes.*—In four of the foregoing cases the bronchial tubes were found more or less dilated. Authors describe three varieties of dilatation of the bronchi. In the first variety, "the bronchial tubes, instead of becoming progressively and rapidly smaller as they subdivide, present such dimensions that the subdivisions nearly or quite equal in size the tubes from which they are given off."‡ In the second variety, partial dilatation takes place in one or more tubes, so that a given tube, instead of not diminishing in size, absolutely increases, and sometimes to a considerable extent. The third variety is that in which the bronchial tubes are irregularly dilated and contracted, or, as suggested by Dr. Hodgkin, the dilatation being irregular, those portions of a tube or tubes which remain in a normal state, *appear* to be contracted. The kind of dilatation observed in the bodies of grinders was of the first variety.

It is quite impossible for me to enter into an examination of the alleged causes of dilatation of the bronchi; but I wish it to be distinctly borne in mind that their enlargement is often found in connexion with other pulmonary affections. Thus, Dr. Williams remarks,—"In pleuro-pneumonia, the lung is inflamed and at the same time compressed by an effusion into the sac of the pleura; if it remain long in this state, the smaller air-cells and tubes become obliterated by the adhesion of their sides, so that when the liquid is removed from the pleura, they will not expand again with the enlargement of the chest: but the large and middle-sized bronchi are not obliterated; they bear the whole force of the inspired air, and become consequently dilated by it."§

* *Researches on Phthisis;* Sydenham Society edition, p 92.

† *Library of Medicine*, vol. iii., p. 198.

‡ *Lectures on the Morbid Anatomy of the Serous and Mucous Membranes.* By Thomas Hodgkin, M.D.; vol. ii., p. 55.

§ *Library of Medicine*, vol. iii., p. 104.

Now, what is true of the effect of pleuritic effusion is equally true of the deposits which result from pneumonia—they act in a similar way; and hence Dr. Addison, in the course of his valuable contribution on the "Pathology of Phthisis," in *Guy's Hospital Reports* for April, 1845, observes,—"This inflammatory condition of the lung is very commonly accompanied by a corresponding condition of greater or less portions of the mucous membrane of the air-passages, and especially of the neighbouring bronchi, which, under the circumstances, are usually found somewhat dilated, and have their parietes thicker and softer than natural." And, again, the same writer observes:—"*The permanent indurations of the pulmonary tissue, which I have described, especially when partial, are occasionally accompanied by considerable dilatation of the bronchial tube or tubes passing by or near them. These dilatations, I believe to be an effect, and not a cause, of the indurations, as some have imagined.*"

The obvious inference to be drawn from the foregoing statements is, that the dilated condition of the bronchi *does not constitute any special peculiarity,* but is a frequent, if not a constant, accompaniment of pulmonary inflammation or induration.*

(*d.*) *Emphysema.*—In only two of my cases was there any emphysema. In one case it was to a very slight degree at the

* The theory of Dr. Holland respecting the cause of the dilatation of the bronchi, is sufficiently singular to warrant its introduction in this place. "The violent and full expirations occasioned by coughing," he observes, "are of course immediately followed by inspirations correspondingly ample, by which the air is introduced in large quantities into the lungs. The elevation and depresion of the chest are only just perceptible in ordinary respiration. When ten times the amount of air, not only in individual acts, but in a given time, enters the lungs, these organs are expanded in a correspondingly increased proportion. The air-tubes and the cells are under the necessity of doing ten times the amount of functional duty; and it is a law of the animal system that the development or enlargement of an organic apparatus is according to the exercise of it. We know of no exceptions," the author adds, "nor can we imagine one." A close examination of the cases in which dilatation of the bronchi most frequently occurs, will be sufficient to show the utter fallacy of the foregoing opinion. Dr. Holland further states, "that certain structural changes, such as dilatation of the bronchial tubes, the expansion of the air-cells, and the thickened and inflammatory condition of the mucous membrane, *retard the progress of pulmonary degeneration!*"—(pp. 38–9)—whilst the fact undoubtedly is, that the dilated bronchi and occasional emphysema are the consequence of the organic changes which have previously taken place in the parenchymatous structure of the lungs.

summit of the right lung; and in the other it was found at the inferior edge and posterior surface of the same lung. In all probability, the emphysema in each case was occasioned by long continued and severe efforts of coughing.*

I pass on now to notice the remaining class of organic changes—that which I have designated the primary or essential.

3. In this class will be comprehended inflammation of the lining membrane of the larynx, trachea, and bronchi; the small bodies resembling currants in different parts of the lungs; the larger masses found in the pulmonary tissue, and tubercles. I have placed all these textural changes in one class, because I regard them as all resulting from one cause, namely,—*congestion or inflammation.*

It will not be needful to dwell particularly on the marks of inflammation which are often observed in the lining membrane of the larynx or trachea; it will be sufficient to remark, that both inflammation and ulceration are met with from time to time. But we must not forget that precisely the same lesions are frequently observed in ordinary cases of phthisis, and that their origin is even yet matter of dispute. Dr. Holland is of opinion that, "in a large class of cases, the larynx and the trachea are primarily, and for a considerable time, alone affected." This I doubt: but Dr. Holland describes the symptoms by which the affection is characterized; and, in order to show their dependence upon the state of these parts, he observes,—"On the examination of the larynx during the continuance of those symptoms, the mucous membrane is often

* Emphysema is probably the lesion to which Dr. Holland refers when he speaks of "expansion of the pulmonary tissue." At least, if this be not the case, I confess my inability to understand him; but if it be, I am equally at a loss to understand how emphysema should be "favourable to the prolongation of life." Dr. Holland's theory shall have the advantage of being expounded in his own words. "In treating of the influence of gritty and metallic particles on the respiratory organs," he says, "there are two important structural changes to which they give rise, to which no writer has ever alluded—*an enlargement of the bronchial tubes, and an expansion of the pulmonary tissue.* [The italics are his own.] These are not invariable effects, but they are produced in an immense number of instances, as we shall subsequently endeavour to prove; and the production of them, though accompanied with serious symptoms, distressing cough, and difficulty of breathing, are nevertheless more favourable to the prolongation of life than the absence of them, in the artisan suffering from other morbid conditions, induced by the inhalation of such particles."—*Diseases of the Lungs from Mechanical Causes*, p. 12.

much more florid and vascular than is natural, and occasionally small ulcerated points are observed."—(page 33.)

Now, this statement I shall not attempt to contravene, inasmuch as I do not pretend to be able to inspect the lining membrane of the larynx during the life-time of the patient. A very large proportion of the cases which have fallen under my own observation, however, have presented none of the symptoms which usually denote the existence of laryngitis, either in its acute or chronic form. The lining membrane of the bronchi bore marks of inflammation, of greater or less intensity, in almost every case which has been detailed. Yet, nevertheless, I am not disposed, with Dr. Knight, to regard "the mucous membrane of the air-passages as the original and principal seat of the grinders' asthma." On the contrary, I contend that the textural changes which are found in the substance of the lungs, constitute the essence of the disease. And, further, I maintain that the morbid appearances observed in the mucous membrane of the air-passages, would not induce those general symptoms and physical signs by which the disease is characterized.

The structural changes met with in the lungs have already been described as *tubercles—small bodies, resembling currants—and larger masses;* and these changes, as already intimated, I attribute to previously existing congestion or inflammation of the substance of the lungs. It will be proper briefly to notice them in the order in which they stand.

(*a.*) *Tubercles.*—In four of the cases detailed, tubercles, in various conditions, were met with in different portions of one or both lungs. The opinion of the profession is greatly divided respecting the influence of inflammation in the production of tubercles; but I do not hesitate to state my own belief, that it is not only capable of promoting their developement in cases where there is any hereditary predisposition to tubercular disease, but also of producing them in peculiar constitutions, although there be no hereditary predisposition to phthisis. In confirmation of this statement I must again refer to the cases before related.

On referring to the four cases in which tubercles were found after death, it will be perceived that in one case there was probably hereditary predisposition, inasmuch as the mother had previously

died of phthisis. In another case, the wife had died of phthisis. I mention this particularly, because the profession is, to some extent, divided on the subject of the contagiousness of the disease, or the possibility of it being communicated by an infected person to a healthy individual with whom such person sleeps. In a third case, the family history is very imperfect, although there is no evidence that either of the parents died of phthisis. In the fourth case, it is expressly stated that *no member of his family ever died of phthisis.*

Now, it is particularly worthy of observation, that in every one of these cases where tubercles existed, a vascular condition of the lung was also present. Thus, in the case of Wiseall, it is stated that *the substance of the lung was considerably injected.* In the case of Hallam it is said that *the tubercles were largely interspersed in portions of the lung, which were of a bright red colour.* In the case of Hardy, *the lung was very much congested, and all the vessels enlarged;* and in the case of Shepherd it is stated that *some portions of the lungs presented the appearance of circumscribed pulmonary apoplexy.* I am perfectly aware that some persons may doubt whether this hyperæmatous condition of the pulmonary substance ought to be considered as the cause or the consequence of the tubercular deposit; I regard it as the former. But let us divide these cases of tubercle into the two classes into which they naturally arrange themselves—those in which there was hereditary predisposition, and those in which there was not. Now, all writers agree that where a predisposition to phthisis exists, the disease itself is often induced by anything which deranges the balance of the pulmonary circulation, or causes a greater or less amount of inflammation of the lungs. It would be easy to adduce a number of authorities in support of this statement, but I forbear, and proceed to make one or two observations on the cases in which there was no hereditary predisposition.

In one of the cases detailed, it is distinctly stated that no member of his family ever died of phthisis, and yet on the examination of his own body, each lung was extensively studded with tubercles, some of which were undergoing the process of softening, and a tubercular cavity existed at the summit of the right lung. In this case, moreover, the substance of the lung was considerably injected. Now, I am disposed to regard this as an example of the formation of tubercle from long contined irritation or inflammation of the

pulmonary tissue. I come to this conclusion from the following considerations:—

First. Long continued irritation or inflammation is capable of producing tubercular deposits.

Secondly. In the case under consideration, the individual had been long exposed to sources of irritation.

Thirdly. The habits of intemperance in which he formerly indulged.

In proof of the correctness of the first of these propositions, I might safely appeal to the experience of any impartial observer, or I might bring forward the experiments of Cruveilhier, Dr. Kay, and others, but I shall content myself by adducing two brief quotations from Andral and Alison. "The alterations which precede the developement of tubercles," says the former of these distinguished writers, are chiefly the following:—

"First. Hyperæmia of the bronchia of a certain size.

"Secondly. Hyperæmia of the air-cells and ultimate ramifications of the bronchia, without obliteration of their cavities.

"Thirdly. Hyperæmia of the same parts, with considerable thickening of their parietes and obliteration of their cavities.

"Fourthly. An effusion of blood into the tissue of the lung; the blood thus effused coagulates, becomes a living part, and secretes tubercles."*

Dr. Alison observes that "the deposition of tubercles may be, and often is, the result of an action to which it would be absurd to give any other name than inflammation."†

In proof of the second proposition, it is only necessary to observe that from a very early age the individual had been occupied as a grinder.

The intemperate and irregular life which the patient had led would necessarily impair the energies of the constitution, and correspondingly lower its vitality. A change of this kind would appear necessarily to precede the developement of tubercles in all cases where the hereditary predisposition does not exist. The first link in the chain of morbid action is probably connected with the digestive organs; the functions of digestion and assimilation are imperfectly performed, the vital properties of the blood conse-

* *Pathological Anatomy*, vol. ii., p. 553.

† *Outlines of Pathology and Practice of Medicine*, vol. i., p. 196.

quently become impaired, an abnormal quantity of blood is determined to the lungs, partly in consequence of the position in which the grinder works rendering the full expansion of the chest impossible, and therefore obstructing the freedom of the pulmonary circulation, and partly, also, in consequence of the inhalation of irritating substances; and the result is the effusion of an unhealthy aplastic deposit, which cannot be distinguished, either by microscopical appearances or chemical tests, from what, under ordinary circumstances, we call genuine tubercle.

(*b.*) *Currant-like Bodies.*—Another of the morbid appearances is described as small dark-coloured bodies, resembling currants: these are often extensively met with both on the surface and in the substance of the lungs. A frequent examination of these bodies has convinced me that they consist of nothing more than the dilated extremities of veins, containing some of the solid constituents of the blood. I have often met with precisely the same appearances in other cases where there was much congestion of the pulmonary vessels, and have traced their connexion with the scalpel.

(*c.*) *Masses.*—The only morbid appearance which remains to be accounted for, is the masses which are met with in different portions of the lungs, and which vary considerably in size, colour, and consistence. Sometimes they are not bigger than a nut, at other times they are as large as an orange; sometimes they are of a greyish colour, at other times they are black; sometimes they are extremely dense, at others they are cut with ease.

These masses existed in four of the cases which have been detailed. On what do they depend? In some instances, I believe they are occasioned by the effusion of blood into the parenchymatous substance of the lungs, constituting what is properly called pulmonary apoplexy; but in the majority of cases they are doubtless the consequence of pneumonia, either in the acute or chronic form, and to which the grinders are peculiarly liable. It must be recollected that pneumonia may be chronic from its commencement, or it may become chronic after the subsidence of the more urgent symptoms of the acute disease; and it must also be borne in mind that the symptoms of pneumonia

are often of so slight a character, as scarcely to attract the attention of those who are the subjects of it. My own experience enables me most thoroughly to corroborate the statement of Dr. Addison, when he says that there exists a form of pneumonia "incident to all ages and constitutions, in which there is but little cough or expectoration, and in some instances none at all; and that, in consequence, this simple form is often entirely overlooked."* But it will be proper to enquire whether indurations analogous to the masses which have been described are ever met with as the consequence of inflammation. On this subject a few brief quotations from the writings of men of unquestioned eminence and authority, must be adduced. "It occasionally happens, especially where pneumonia has continued for a considerable time in reduced subjects," says Dr. Hodgkin, "and where the sanguineous engorgement is neither very great nor of a deep colour, that we find some portions completely consolidated, and almost throughout of a light colour, bearing very close resemblance to the state which I have described as resulting from the least plastic form of pneumonia. It is often limited to particular lobules, but is not unfrequently more irregularly diffused."†

Again, in enumerating the effects of pneumonia, Dr. Addison specially mentions "*grey induration,*" which he says "is made up of a mixture of dull or yellowish white, and black matter, in variable proportions, the tint being light or dark according to the greater or less quantity of one or the other of these; the lighter variety occasionally passing insensibly into the uniform albuminous induration, the darker, on the other hand, being of an iron-grey colour, or approaching in some instances nearly to black; the former, again, being in general of moderate density, the latter usually much firmer, and sometimes even as hard as cartilage."‡

Again, when treating on the subject of peripneumony, and immediately after pointing out the manner in which a portion of lung which has been the seat of inflammation becomes restored, Dr. Alison remarks,—"In other cases, chiefly of slower progress, the portion of lung that has been condensed by inflammation,

* *Guy's Hospital Reports*, April, 1845, p. 3.

† *Lectures on the Morbid Anatomy of Serous and Mucous Membranes*, vol. ii., p. 108.

‡ *Guy's Hospital Reports*, October, 1843, p. 377.

becomes harder and drier, with a more uniformly grey colour; and the patient either dies when it is in this state, or recovers with a portion of lung permanently condensed and impervious to air, which portion then acquries a dark colour from the usual black matter of the lungs, and sometimes, although rarely, passes into ulceration, without any previous deposition of tubercles."*

Once more, Dr. Williams observes,—"In circumscribed peripneumonies, or in small parts of more extensive hepatization, a chronic inflammation sometimes goes on, and produces that kind of tough induration which is the general result of chronic inflammation in a parenchymatous structure. Thus," he continues, "in the lungs of those who have suffered from long and repeated attacks of inflammation of the chest, even where there are no tubercles, we not unfrequently meet with portions of the tissue that are dense, almost destitute of air and liquid, tough, and sometimes almost cartilaginous."†

The foregoing quotations render any further observations, in illustration of the nature of the indurated masses so commonly met with in the lungs of grinders, entirely unnecessary. Perhaps enough has also been said respecting the colour of these deposits, aud the changes which they subsequently undergo. In order, however, to show that in these respects they do not constitute an exception to what is commonly observed in other cases, I must add three concluding brief quotations.

First. With respect to colour, Dr. Williams remarks,—"In the lungs the consolidation may remain long without any contraction, but they become deeply blackened by an accumulation of the peculiar black matter of the lung.‡" On the same subject Andral remarks, that "the induration of the lung may be accompanied by different alterations in its colour: it very seldom presents a red shade, being much more commonly either yellow, grey, brown, or black. The black induration of the pulmonary parenchyma," he proceeds, "differs, in my opinion, in no respect from the grey or yellow induration of the same part, except in colour."§

* *Outlines of Pathology and Practice of Medicine*, vol. i., p. 279.

† *Library of Medicine*, vol. iii., p. 154.

‡ *Principles of Medicine*, p. 322.

§ *Pathological Anatomy*, vol. ii., p. 521.

Secondly. With respect to subsequent changes, Andral remarks,—"It has repeatedly occurred to me to find a portion of pulmonary parenchyma in a state of induration, and containing one or more ulcerous cavities, when not a single tubercle was to be found in the entire lung, or if a few were detected, they were very inconsiderable in size and number."*

Finally. When treating on the formation of these indurations, Dr. Addison observes, that "whether they occur in tuberculated lungs, or in lungs unoccupied by tubercles, they have the same origin; they are the result of pulmonic inflammation; they present the same changes in their progress to permanent induration or repair, and manifest the same tendency to retrograde or disorganize at various periods of their existence, according to the state of the patient's constitution, or under the influence of certain morbific causes acting more immediately upon the lungs themselves; they may soften down and even form sloughs at a very early period of their development or formation,—perhaps a few weeks or months after the occurrence of the inflammation which gave rise to them,—the pulmonary tissue, although consolidated, still presenting various degrees of brittleness or loss of cohesion; or they shall proceed to perfect hardness and quiescence, and either remain passive and without creating any inconvenience, or, from some cause or other, after an indefinite period, begin to disintegrate and give rise to excavation, with most of the ordinary signs and symptoms of phthisis."†

I have now completed my task. I have explained the ordinary operation of grinding, given some particulars respecting the statistics of different classes of grinders, and pointed out the signs and symptoms of the pulmonary affection to which they are liable. I have also directed your attention to the cause of grinders'

* *Pathological Anatomy*, vol. ii., p. 526.

† *Guy's Hospital Reports* for April, 1845, p. 5. A case strikingly illustrative of these remarks has very recently fallen under my observation. A man—not a grinder—who had for many years led a very intemperate and irregular life, was admitted under my care at the Infirmary. He made no complaint, except of weakness and some difficulty of breathing. On examining his chest, the left lung was extremely dull on percussion, and there was not the slightest respiratory murmur to be heard throughout. The right side of the chest sounded well, and the respiratory murmur was louder and clearer than natural. In the course of a few weeks the stethoscope revealed the

asthma; and here we have found it important to insist not merely upon the inhalation of mechanical particles, but also upon the position in which the grinder works, the intemperate habits to which he is addicted, and the exposure to wet and cold to which he is subjected. We have noticed, further, the morbid appearances which are most frequently observed in the examination of the bodies of grinders after death; we have divided those appearances into three distinct classes—the primary, the secondary, and the intercurrent or non-essential; we have examined these three classes in detail, and have finally arrived at the general conclusion, that the disease essentially depends upon congestion or inflammation of the parenchymatous structure of the lungs; in some cases giving rise to the formation of tubercle, and in others occasioning pulmonary degeneration without tubercular deposit.

It does not at all enter into my present plan to discuss the mode of treatment which is most eligible in the affection which has passed under review. It is obvious, however, that the treatment must be both prophylactic and remedial. Under the former division, two great branches will necessarily be included, namely, mechanical contrivance and moral agency. The first of these will comprise a thorough ventilation of the apartments in which grinding is carried on, so that the foreign matters which at present exist so abundantly in the atmosphere, may be removed; and it will also involve an alteration of posture in which the grinder works, as well as the avoidance of the exposure to cold and wet, from which he now suffers.

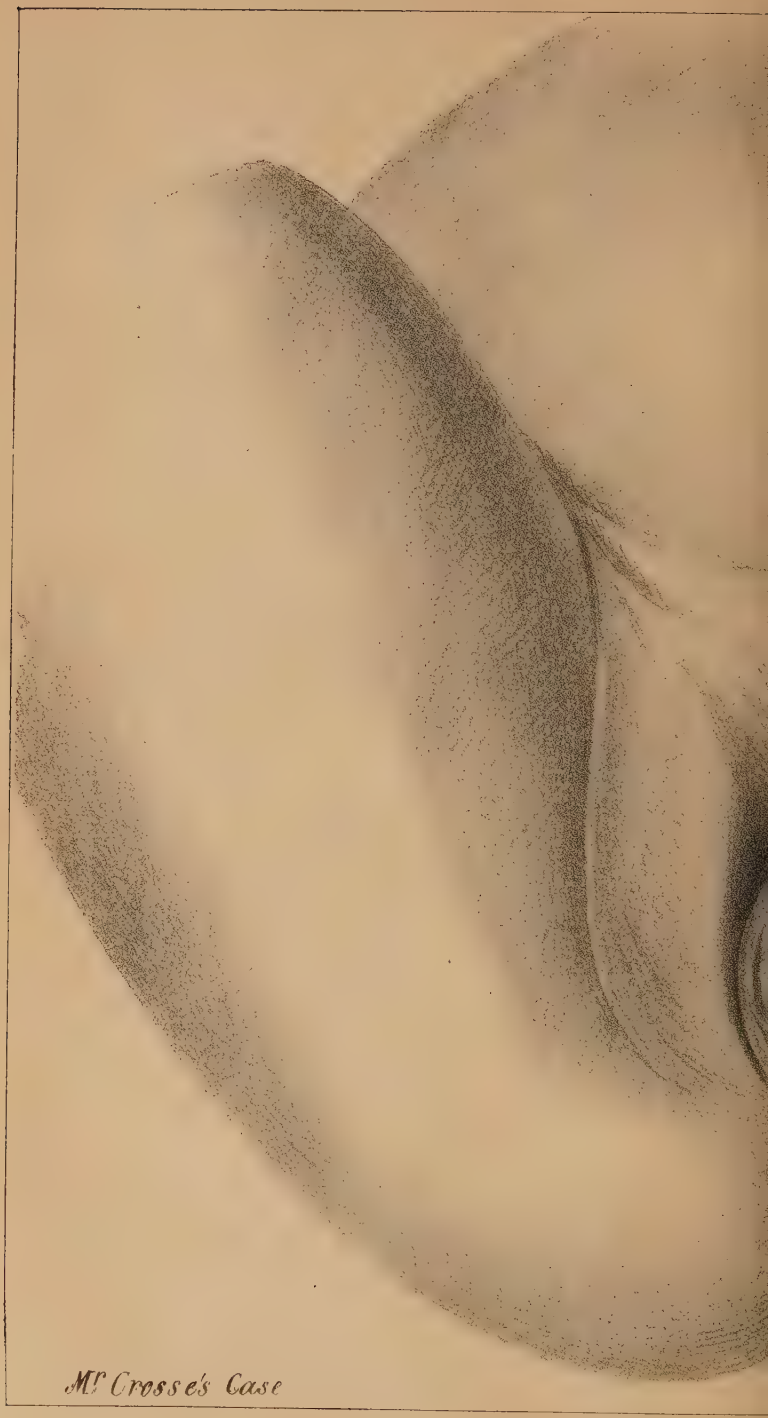
The second branch of this division is also of great importance. If the moral status of the grinder were elevated, his habits of intemperance would be subdued, the whole system would be better nourished, and, consequently, there would be less liability to the

existence of a large cavity in the left lung; cough and expectoration became frequent and copious, diarrhœa set in, and the patient died. On examining the body after death, a large cavity was found, extending from the apex to the base of the left lung; the surrounding pulmonary tissue was extremely dense, but did not contain a single tubercle, and there was no tubercular matter in the cavity. Its contents consisted of the debris of the lung, mixed with a quantity of fluid. The odour was very offensive, but not of a gangrenous character. The right lung was healthy, but its surface presented many of the currant-like substances to which allusion has previously been made: these substances were very satisfactorily shown to be connected with the congested condition of the veins.

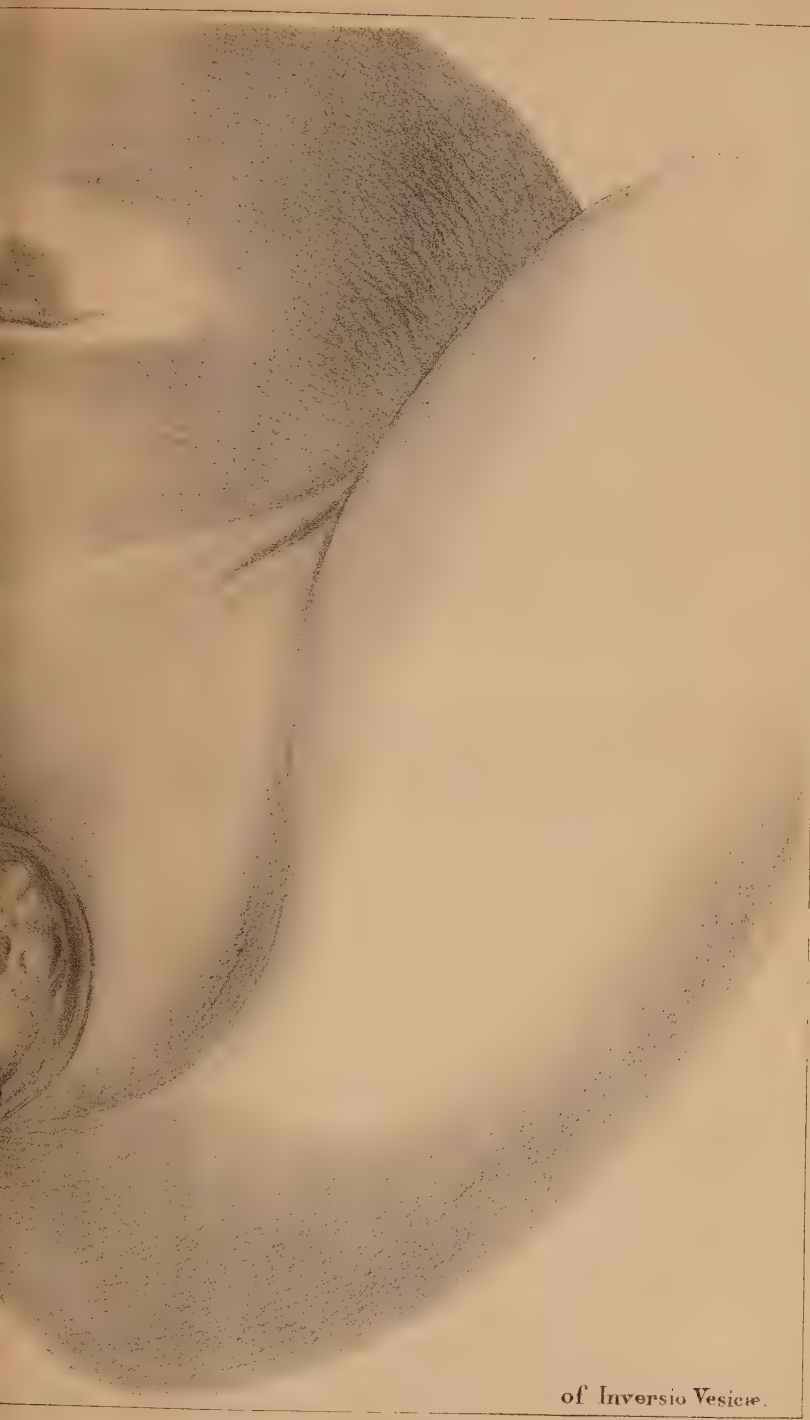
formation of unhealthy deposits on the occurrence of incidental pulmonary inflammation.

On the subject of remedial measures it is impossible to enlarge; they will necessarily vary with the complications which may exist in any given case, and also with the stage of the disease.

There are two great objects, however, which will always engage the anxious attention of the medical attendant. The first is, to subdue existing inflammation; and the second, to support the strength of the patient.



Mr Crosse's Case



of Inversio Vesicæ.

ON THE

INVERTED DISPLACEMENT OF THE URINARY BLADDER,

WITH A CASE.

BY JOHN GREEN CROSSE,

Senior Surgeon to the Norfolk and Norwich Hospital, &c.

The rarity of a particular case is one of the assigned causes of errors in diagnosis, which furnishes the best excuse for giving publicity to such as are of very unfrequent occurrence. The case which I shall submit for perusal has frequently been mentioned by me, and been received by some, even by those possessed of great experience, with startling incredulity. Indeed, those who enjoy vast opportunities of practical observation, and rely little on literary resources, are apt to regard as improbable what they have not themselves witnessed.

In the year 1829, a highly respected colleague of mine, since deceased, received under his care a healthy-looking female child, aged between two and three years, on account of a tumour, about the size and shape of a walnut, projecting visibly at the external *labia pudenda*. It was of a florid-red colour, and somewhat granulated upon its surface, so as to resemble a large strawberry; and the surgeon entertained a notion that it was a vascular tumour, which might be removed by ligature, on which account he requested me to inspect it.

After a slight examination, I expressed my doubts as to its being a vascular tumour, and dissuaded him from the hasty application of a ligature. I could not, however, immediately explain its nature, having no conception how such a tumour could be formed by the displacement of parts only, without any superadded morbid growth. Towards the posterior part of the tumour, and on its sacral aspect, there was an aperture, which was conjectured to be the entrance into the displaced urethra. A very small female catheter easily entered this aperture, and passed along a channel a little to the left side of the median line: urine distilled in drops through the catheter, but there was not a gush, although the instrument had entered so far that we concluded it must have reached the cavity of the bladder. Besides what thus oozed through the catheter, slightly tinged with blood, there was an oozing of urine from another source, which was not explained until a second and more strict examination, instituted a few days afterwards, on my casually coming to the patient's bed-side, just as the surgeon was prepared to apply a ligature round the neck of the tumour.

I now found, concealed in a fold of the tumour, and near to the posterior junction of the labia, two orifices not far asunder, from which the urine oozed, and which were evidently the vesical terminations of the ureters. On pressing the tumour firmly, as if to reduce it like a hernia, I found it yield and pass gradually behind the symphysis pubis, and within the labia; and under a continuance of the taxis it all retired, leaving the external parts in their proper shape and position. A passage remained, through which the tumour on retiring had taken its course, which was actually the dilated urethra, into which I *could* and *did* introduce my little finger, until it fairly entered the cavity of the replaced bladder; for it now became clearly demonstrated, that the vascular red tumour, externally presenting itself as first described, was the urinary bladder in its entire thickness, including its mucous, muscular, and peritoneal coats, prolapsed through the dilated urethra, and at the same time inverted or turned inside out. The proper lining membrane of the bladder became, in the progress of this displacement, the external covering of the tumour. As fast as the urine was secreted by the kidneys, it oozed from the terminating orifices of the ureters, which were concealed within a fold of the exposed surface of the tumour, and approximated to each

other. The neck, or deepest and narrowest part of the tumour, just concealed within the labia, was covered by the inverted lining of the urethra, the inversion being complete.

In this instance, had a ligature been efficiently applied to the neck of the tumour, as was contemplated, the bladder would have been removed including all its coverings, the ureters cut through just above their terminating orifices, and the peritoneal cavity largely opened, with a necessarily fatal result!

As the friends of the child could not be applied to, the history was imperfect. It was stated that the tumour had existed for a considerable time, and been always attended by stillicidium urinæ; also that it had been once replaced, but descended again, shortly before it came under my observation. During the short period that the child remained under my notice, after the replacement of the bladder, there was no relapse; and since this account was sent to press, I have been fortunate enough to ascertain, and to be enabled to add, that the patient is still living, after an interval of sixteen years, and is a healthy young woman, save only the affliction of the incontinence of urine, with which she has been constantly troubled, but without any relapse of the vesical displacement.

Previously to the reduction, and whilst, consequently, the nature of the case was under investigation, I was permitted to have a cast taken, which remains in my own cabinet; a duplicate is also contained in the Museum of the Norfolk and Norwich Hospital. The displaced bladder presents an external tumour at the labia, projecting above three-quarters of an inch, oval-shaped like a walnut, and measuring four inches and a half at its circumference, where bounded by the labia; it answers to the median line of the body, and is symmetrical. A distinct indentation or fossa marks, in the cast, the seat of the terminating orifices of *the ureters,* and was caused, no doubt, by *their* being already stretched to the utmost in the progress of the displacement.

A case very similar to the preceding was described by Dr. Murphy* several years ago; it occurred in a female child four

* See the *London Medical Gazette* for January 19, 1833, vol. xi., p. 112:—A medical man had seen this child six hours before her admission into the Meath Hospital, in Dublin, and failed to reduce the part after a tedious trial, believing it

years old, and was regarded by the writer as being quite unique. He effected reduction by pushing up the fundus first, indenting it by the end of a gum-elastic catheter.

In the instance here recorded, I accomplished reduction by returning first that part of the bladder which is next the urethra, and lastly the fundus. It should be remembered, therefore, that two plans for reduction are available, either of which may be preferable to the other under particular circumstances. If we knew in which order the inversion had occurred, I consider that the rule would be, to attempt replacement of the part by reversing that order, and returning first that part which became lastly inverted and prolapsed; but in our ignorance on that point, we must adopt the plan which in practice is found most promising of success in each particular case. In the example which I witnessed, the urethra was very much dilated, and hence I succeeded in the way described; but where the urethra is less dilated, to replace the bladder by making a dip in the fundus, may be preferable.

Writing under circumstances that preclude many remarks, I can only add, that Rokitansky* speaks of "intus-susception and prolapse of the bladder into and through the urethra in females," but gives no satisfactory description of the displacement; neither am I able, at this moment, to refer to any systematic author who does so. Mason Good's† short chapter "On Protrusion of the Bladder

to be a *prolapsus ani*. Dr. Murphy, on a superficial inspection, took the same view of the case, and was proceeding to treat it accordingly, but discovered his mistake on making a closer examination. The tumour was pyriform, depending by its apex from the upper angle of the *labia pudendi*, of a dark mahogany colour, and equalling the size of a small hen's egg. On raising the tumour forwards towards the pubes, the vagina could be seen, but no meatus urinarius. Some congenital deformity was next thought of; but at length the real nature of the case was suspected. On slight traction of the tumour downwards, the inversion was rendered complete, and the orifices of the ureters were discovered, and the probe introduced into them, followed on its withdrawal by drops of clear urine. Replacement was readily effected by steadying the neck of the bladder by the thumb and fore-finger of the left hand, and pushing the fundus upwards by the end of a gum-elastic catheter. Some tenderness of the pubic region followed, attended with vomiting; but these symptoms quickly yielded to leeches, warm water, and castor-oil, and in six days the patient was discharged cured.

* *Handbuch der Pathologischen Anatomie*, B. iii., s. 450; Wien, 1842.

† *The Study of Medicine;* fourth edition. By Samuel Cooper, vol. iv., p. 112.

into the Urinary Passage," based chiefly on the authority of Sauvages, is not at all to the point: if a polypus growth from the lining membrane of the bladder happened in the female, as I have known it occur in the male, it might descend into and occupy the urethra, and answer to the appearances and symptoms described by these writers.

Of a very different description are those cases, described by numerous authors,* and so frequently met with that one observes them in almost every extensive pathological collection, where, from a defect in the formative process, the anterior parietes of the abdomen next the *ossa pubis*, and also of the bladder, remain unclosed, allowing the lining membrane of this organ to protrude, and exposing the terminating orifices of the ureters, from which the urine is observed, in the living subject, to distil in drops as regularly as it is secreted. These cases have often misled writers to give accounts of fungous tumours, and have sometimes received the denomination of inversions of the bladder.

When, from difficult labour, the bladder and contiguous part of the vagina sloughs away, creating a free communication between these two cavities, a real inversion of the bladder may take place through this abnormal aperture, of which I have known several instances; and in one, the inversion prolapsed so far as to escape at the external labia, and presented on its surface the terminations of the ureters, from which the urine was observed to dribble continually; when the injury is to this extent, the afflicting symptoms can only be palliated, and have not, to my knowledge, admitted of cure.

Protrusions of the relaxed lining membrane of the bladder *into* and *even through* the urethra, and vascular growths taking the same course, are not very unfrequent, as every surgeon of great experience knows, by having been called upon to treat such cases by operation; but these are very different from the inversion and prolapse of the entire bladder through the urethra in female children,—a fact which, however rare, ought henceforth to be regarded as satisfactorily ascertained.

That the two recorded instances of this rare displacement should have occurred in females of very tender age, may seem singular, as

* Refer to Ruysch, Ploucquet, and Baillie.

it might be expected that the aged would be more relaxed and more liable to suffer in this way; but it accords with what I have experienced in proceeding to remove the urinary calculus by dilating the urethra of the female—a process much more easily and safely effected in the young than in those of advanced years.

In the accompanying plate, the dotted lines diverging from (*a*) point to the fossa in which the terminating orifices of the ureters are situated; the rest of the plate, made after the cast, needs no explanation.

REPORT

OF

THE READING DISPENSARY,

FOR THE

YEARS 1841, 1842, 1843, 1844.

BY CHARLES COWAN, M.D., E. & P.,

Physician to the Royal Berkshire Hospital and Reading Dispensary;

READ BEFORE THE

READING PATHOLOGICAL SOCIETY.

The following Report is drawn up in accordance with the plan of registration we had the honour of submitting to the members of the "Provincial Medical and Surgical Association," in 1841, and which we have since illustrated in two Reports of private practice; published in the *Lancet* of June 11th, 18th, and 25th, 1842; and in the *Provincial Medical Journal* of May 6th, 13th, 20th, 27th, and June 4th, 1843.

Of the value of systematic registration, for the purpose of correctly ascertaining the relative proportion and local prevalence of disease, there cannot be any reasonable doubt; for no experience, however extended, no memory, however tenacious, can, unaided by methodical analysis, retain the numerical relationship of any large number of facts.

It is cheering to feel that purposes of general as well as of individual utility, are becoming more and more recognized as the legitimate goal of medical exertion; and, next to the relief of human suffering, the determination of the character and amount of local disease is the most important service which our public institutions can render. Why we have not long since acquired all

the information they are so well calculated to supply, arises from the absence of plan, and still more from the labour of its honest execution. The former is easily supplied; but the sacrifice of time—the daily perseverance required—the dry and almost repulsive nature of the operation—are such as to render the accumulation of materials a tardy and difficult task; while their analytical revision proves a still more formidable demand upon the observer's diligence and zeal. Not that statistical research is destitute of much interest and reward, but the ultimate gain is not always sufficiently apparent to stimulate and encourage to the work, and so many tempting avenues of lighter labour are continually presenting themselves, that the mind revolts from voluntary submission to so mechanical and inglorious a process.

Our present Report, though a very limited and imperfect contribution, is yet, we believe, sufficiently copious and accurate for the purpose it more immediately contemplates.

It is derived from four years registration of an institution which admits from ten to twelve hundred patients annually, out of a population of little more than twenty thousand. The charity includes every district of the town, is scarcely at all attended by country applicants, and, during a period of four years, may be said fairly to represent the average diseases of Reading.

From the absence of extensive manufactures, and the more equalized and scattered residences of the labouring classes, a far greater similarity of condition prevails among all grades of society than in most of our larger towns; while the proportion of the institution to the actual population is, we think, sufficiently great to render the tabulated results of between three and four thousand cases capable of general application.

The fact of the register being kept by not less than six different practitioners, has somewhat complicated and impaired the task of classification; strict uniformity of nomenclature and diagnosis being impracticable. This is, however, the less to be regretted, since in large numbers, and where the object is to view disease *en masse*, rather than to elucidate its individual peculiarities, the vitiation of our conclusions from such a source is only very partially operative. Whatever obscurity, for example, may attach to the diagnosis of many nervous or gastric affections, the relative preponderance of one or the other, *as a class*, may be correctly

ascertained; and it is by glancing at a bold outline of the whole, rather than by a minute sub-division of detail, that we are enabled to arrive at a just estimate of the nature and amount of local disease.

It is with this impression that we have ventured upon the present Report; and we shall be much gratified if the results are sufficiently valuable to induce others to engage in this arduous but well-repaying department of medical investigation.

REPORT.

Total number of Admissions	4423
1841	1002
1842	1075
1843	1205
1844	1141
TOTAL	4423

SEX.

	1841.	1842.	1843.	1844.	TOTAL.
Males	374	415	481	433	1703
Females	628	660	724	708	2720

The preponderance of female applicants in each year is singularly uniform, and in accordance with the general experience of similar institutions. It also serves to indicate the value of statistical investigation, and justifies a confidence in numerical returns, which could not otherwise be felt.

The social condition of women, their sexual peculiarities, the greater sensitiveness of their moral and physical health, combined with less imperative demands upon their time, sufficiently account for the fact; while, on the other hand, in hospitals where casualties and the graver cases of disease are principally admitted, an excess of male patients is more usually observed. It may also be remembered, that the disproportion in the sexes is most apparent from puberty to adult life.

SEASON.

	1841.	1842.	1843.	1844.	TOTAL.
First Quarter	286	270	325	293	1174
Second Quarter	239	248	321	278	1086
Third Quarter	232	256	282	291	1061
Fourth Quarter	245	301	277	279	1102

The increase of applicants during the six colder months, (130 in four years,) may be partly attributed to deficient food and employment. When field-work is obtained, many slight disturbances of health are allowed to take their natural course, which in the winter would swell the number of admissions; but an analysis of the following table proves that the difference is dependent on other than accidental circumstances:—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1841	77	74	104	87	74	67	68	67	66	64	61	70
1842	73	68	83	62	75	61	54	69	85	82	83	68
1843	94	72	89	87	98	88	70	73	87	82	63	69
1844	83	80	77	83	88	77	98	61	91	85	83	69
Total	327	294	353	319	335	293	290	270	331	313	290	276

January, March, April, May, September, and October, present an excess of 285 over the other six months; and we may conclude from the table generally, that illness is most prevalent in the spring and autumn. By referring to the nosological table, it will be seen that the variations in numbers is chiefly dependent upon diseases of the digestive and respiratory mucous membrane.

AGES.

	1841.	1842.	1843.	1844.	Total.
Under 2 Years	78	72	98	81	329
From 2 to 5	81	93	76	84	334
5 — 9	73	95	102	90	360
10 — 19	170	133	159	142	604
20 — 29	156	174	196	208	734
30 — 39	156	149	156	170	631
40 — 49	114	133	141	147	535
50 — 59	79	79	84	83	325
60 — 69	40	56	50	77	223
70 — 79	10	17	24	23	74
80 — 89	3	3	7	2	15
Total	960	1004	1093	1107	4164
Omitted	.....	.....	.....	.....	259

The striking correspondence of the above numbers, year after year, demonstrates that the amount of illness in each decade of life is regulated by some general law, and but little influenced by accidental circumstances. About one-fourth of all the applicants is included in the first ten years of life. During the four succeeding periods, it varies from one-sixth to one-eighth. There is then a sudden decrease to $\frac{1}{13}$th, $\frac{1}{19}$th, $\frac{1}{56}$th, and above 80, to $\frac{1}{277}$th.

Looking at the total number of the living at different ages, the disproportion is less than is at first apparent; but the preponderance of disease observable in the early and middle periods of life, is not to be accounted for by such a source of correction.

In our reports of private practice, the number of adults was considerably greater; and it is evident, that with the nature of the institution, the proportions will vary. Were midwifery cases, for example, admitted, the relative frequency of disease and mortality in infancy would be materially increased.

To arrive at results capable of general application, we ought to combine the registers of every description of private practice; and were such a labour accomplished, there can be no doubt that the comparison of a series of years would evidence a strict accordance in the proportions of every period of life. We might detect considerable fluctuations in the prevalence of particular diseases, but the sum total, both of illness and mortality, over any series of years, would be found to be singularly uniform.

Dr. Burton, in his excellent paper on the "Statistics of Fever," infers from the history of epidemics, the probable continuance of an universal and variable, but constant rate of mortality; and from the extensive comparative investigations of Mr. Watt, it seems that the deaths by various diseases are nearly identical at the same ages, and that whatever the total amount of deaths by each disease may be, the proportion which the deaths falling at certain periods of life bear to the whole deaths of these respective diseases, *remains the same.*

This interesting law proves the existence of general influences regulating the life and health of the community, however variously expressed by the greater or less prevalence of particular complaints; and also indicates how difficult must be the correct solution of a therapeutic problem, where agents other than those we are employing are so materially influencing the result. In fact, the whole

philosophy of medicine can be very imperfectly apprehended by a being so limited in capacity and duration, as man; and a juster estimate of the vast extent and difficulty of the inquiry, would tend both to repress much hasty and presumptuous generalization, and establish a juster estimate of the true limits of human instrumentality.

If so much is to be attributed to the action of external agencies, and if by these are chiefly regulated the nature and amount of illness and of death, it is manifest that our expectations of future benefit must be founded far more upon improved hygienic regulations, than upon additions to our pathological or medicinal resources.

As science, in its widest sense, really advances, will the specific power of drugs be less and less admitted, while the physician's claims to respect and confidence will be found to rest far more upon his practical acquaintance with, and power of adjusting, those general conditions which are adverse or favourable to health, than upon his supposed familiarity with agents directly adapted to the cure of disease.

ANTERIOR DURATION OF CASES.

With the exception of very recent cases, there is no inquiry more practically difficult than the ascertaining of the previous duration of illness; and from the register of a public institution we must be content with very general results. But even here the comparison of the numbers in individual years, proves the existence of a law which many omissions and imperfections cannot wholly conceal. The following table can only be regarded as an approximation to the truth, but is perhaps sufficiently accurate to convey a tolerably correct idea of the average prevalence of acute and chronic disease:—

	Under 7 Days.	7 to 28 Days.	1 to 3 Months.	3 to 6 Months.	6 to 12 Months.	1 to 2 Years.	2 to 3 Years.	3 to 5 Years.	5 to 10 Years.	More than 10 Years.	Uncertain.	Omitted.
1841	192	289	169	81	61	29	20	15	15	5	36	88
1842	252	266	174	81	75	28	9	12	7	7	26	138
1843	284	293	198	82	61	26	16	10	12	6	33	184
1844	319	320	185	93	44	19	15	15	2	3	20	113
TOTAL	1047	1168	726	337	241	102	52	52	36	21	115	523

Out of 3785 registered cases, 1047 did not exceed a week in duration, and 2215 were under a month. The line of separation between acute and chronic disease is not easily established; but contrasting the above results with those from our former reports, we find, as might be expected, out of 2627 cases, the proportion of chronic disease in private practice to be considerably greater—one-third of the applicants being from one to six months previous duration, and not more than one-fourth under a month.

DURATION OF TREATMENT.

	Under 15 Days.	15 to 30 Days.	Under 3 Months.	Above 3 Months.	Total.
1841	200	242	259	53	754
1842	204	223	221	59	707
1843	245	247	263	57	812
1844	248	306	350	79	983
Total	897	1018	1093	248	3256

Omitted 1167

As in the preceding table, the above numbers are only to be regarded as presenting a rough outline of the facts; and we shall merely observe, that about one-fourth were discharged during the first fortnight, rather less than one-third during the next two weeks, about one-third from one to three months, and one in thirteen at longer and indefinite periods.

RESULTS.

	Cured.	Relieved.	Convalescent.	Left Sick.	Incurable.	Irregular.	Died.	Omitted.
1841	555	98	57	19	22	36	44	171
1842	531	80	77	8	4	10	23	342
1843	611	77	98	16	6	29	29	339
1844	766	72	98	39	4	41	55	64
Total	2463	327	330	82	36	116	151	916

The great irregularity of registration under this head, including

more than one-fourth of the admissions in 1842 and 1843, materially interferes with the value of such a table, though even here the presence of a law can be clearly perceived.

Strict accuracy of registration is practically most difficult of attainment. A feeble conviction of the importance of results, divided responsibility, a shrinking from avoidable labour, and the many reasons which influence a busy man in accomplishing his necessary duties at the least sacrifice of time, more than explain why this should be the case. Yet with all its imperfections, the local interest and practical application of tabulated results, cannot be denied; they must ever constitute the safe elements of general conclusions, and the only true means of extrication from vague surmise and hypothetical induction.

DEATHS.

The total number of deaths registered was 151: of these 74 were males, and 77 females. Their respective ages were as follows:—

Under	2 Years	38
From	2 to 4	19
	5 — 9	10
	10 — 19	6
	20 — 29	22
	30 — 39	14
	40 — 49	12
	50 — 59	12
	60 — 69	9
	70 — 79	8
	80 — ...	1
	TOTAL	151

SEASON.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.		
1841	2	4	2	8	2	2	3	2	3	4	1	5	38	First Quarter	39
1842	6	4	2	2	...	2	2	1	4	4	1	4	28	Second Quarter	33
1843	5	2	2	5	1	1	2	1	3	4	...	3	29	Third Quarter	41
1844	4	7	3	5	4	1	8	4	8	8	2	2	56	Fourth Quarter	38
TOTAL	13	17	9	20	7	6	15	8	18	20	4	14	151		

CAUSES OF DEATH.

Consumption, 30; bronchitis, 18; scarlatina, 13; pertussis, 11; fever, 10; heart-disease, 8; brain-disease, 8; pneumonia, 6; debility, syphilis, cancer, gastritis, 3 each; dentition, pleurisy, impetigo, gastro-enteritis, hydrothorax, rheumatism, old age, 2 each; small-pox, measles, purpura, infantile remittent, cachexia, ascites, diseased kidney, tabes, hepatic cirrhosis, tympanites, ovarian dropsy, croup, thoracic tumour, vertigo, spina bifida, hip-disease, 1 each; omitted, 3.

The proportion of deaths to the whole number of registered cases was 1 to 24⅓rd; to the whole number admitted, 1 to 29. The relative mortality in males is considerably greater than in females, a fact in accordance with the graver nature of their diseases prior to admission.

The following table exhibits, at a glance, the striking variations in mortality at different periods of life, and proves how important an element is *age* in our estimate of therapeutic agents. Were the earliest periods of infant existence included, the proportion of deaths would be still more unequal.

The causes of death in childhood are chiefly hooping-cough and the eruptive fevers; in adults, consumption exerts the greatest influence; while in advanced life, diseases of the circulating and digestive systems principally prevail.

RATIO OF MORTALITY AT DIFFERENT AGES.

Under	2 Years	1 to 9
From	2 to 4	1 — 17
	5 — 9	1 — 36
	10 — 19	1 — 100
	20 — 29	1 — 33
	30 — 39	1 — 45
	40 — 49	1 — 44
	50 — 59	1 — 27
	60 — 69	1 — 24
	70 — 79	1 — 9
Above	80	1 — 15

With regard to season, it will be seen that the greatest mortality does not coincide with the greatest number of admissions in each month, but rather the reverse. In the six months of lowest mortality,—January, March, May, June, August, November,—only forty-seven deaths took place, not quite one-third; while in the same months, rather more than half the whole number of applicants was admitted. This may be partly explained by death occurring at a

greater or less interval after admission, and the months with least mortality in the register may really most abound in ultimately fatal cases; but the excess of deaths in February, April, September, and October, is more than can be accounted for on this principle, and has no doubt a seasonal origin.

The differences in each quarter are not striking; but commencing the winter at December instead of January, which is a more correct arrangement, we find that in the six autumn and winter months, so divided, 86 deaths took place, and only 65 in the spring and summer.

The variations observable in each year prove that the averages of a longer period are necessary for accurate deductions. The real mortality was, doubtless, higher than our figures indicate. Irregular attendance, the removal or transference of patients, with some probable omissions in registration, more or less influence, but do not materially affect the results.

The plan adopted in the *Nosological Table* will now require a few words of explanation. With some trifling exceptions, the classification is that which has been recommended by Mr. Farr. The diseases of each group are arranged in the order of their relative frequency, thinking it most calculated for rapid revision. In the first four vertical columns we have the number of admissions in each month for each year. The fifth presents the aggregate of these. In the sixth, are the totals in each year; and in the seventh, the gross number of each disease during the whole period. The horizontal totals include the monthly and yearly amount of each group; and these added together form the line of grand totals.

Such an arrangement, though requiring considerable labour, presents a very useful bird's eye view of the whole, and discovers many proportions and relationships in disease which could not otherwise be easily traced. It is of itself a nosological report, and capable of speedy analysis. Were such a form generally made use of, the comparison of different institutions might be readily effected. The influence of season on the nature and amount of disease, the variations in individual years, and the relative healthiness of particular districts, from documents so constructed, could be correctly ascertained. A column of deaths might be advantageously added, and the distinction of sexes

would perfect it still more. So modified, we venture to recommend it for more general adoption.

We have here much pleasure in expressing our obligations to Dr. Francis Chase, for the plan of this table, as well as for the greater proportion of the labour attending its execution, and much regret that feeble health should interrupt the active duties of one whose talents and acquirements well fit him to advance the science of his profession.

The heads of "occupation" and "treatment" are purposely omitted, the locality not including conditions which render the former valuable, and the register presenting insufficient elements for useful therapeutic induction.

The following is a general summary of disease in the order of frequency, and the proportions are contrasted with those obtained in private practice. The differences are very considerable, and evidence the propriety of not deducing absolute conclusions from any one source of information:—

	Dispensary.	Private.
Total number of Cases	3304	2601
Digestive System	798	745
Respiratory	652	335
Zymotic	573	184
Uncertain Seat	553	259
Nervous System	263	233
Cutaneous	237	233
Generative	115	292
Circulating	65	52
Urinary	48	44

In private practice the decrease in zymotic diseases is particularly prominent, and also in affections of the respiratory organs and those of uncertain seat; while, on the other hand, digestive, nervous, and cutaneous disorders, and, still more, those of the female generative system, are proportionately numerous. Of course the statistics of the general practitioner and of the medical attendant on the poor, would equally present their peculiar features; and the whole of these should be collated, to arrive at a perfectly just estimate of local health.

Zymotic Diseases.—It is from the group of zymotic diseases that the health of the district may be best ascertained. Intermittent

fever, it will be observed, does not once occur in our list, and we have not yet met with a single example of ague originating in the locality. It has been noticed, that when intermittent fever has yielded to improvements in cultivation, drainage, &c., typhus very commonly succeeds, and when habitually prevalent, may be referred to some modification of the same endemic cause. But in the 310 cases of fever recorded in our Report, very few, if any, presented the true typhoid character. The group consists of all forms and degrees of pyrexial disturbance in children and adults, not of an eruptive or rheumatic character, and not dependent upon visceral disease. It cannot therefore be regarded as representing a similar class of cases to those included under the same term in the institutions of larger towns. The very few instances of a malignant or typhoid class which we have ourselves seen, were, we think, traceable to accidental causes; and the class of cases with which, as a student in Edinburgh and Paris, we were familiar, may be said to be almost unknown, or to be only occasionally present in the district we are now analyzing.

The fact of only ten deaths, or one in thirty-one, being reported under this head, is strongly confirmative of such a conclusion; and in the general construction of the town, its scattered and wide streets, the dry and gravelly nature of the soil, the almost natural drainage of the surface, and the limited extent of the densely populated and badly built districts, there appears to be the minimum of all those conditions which can be regarded as generative of the severer forms of fever.

Though Reading may therefore be considered, in these respects, as on the whole decidedly healthy, its immunity from febrile disorders would be still greater were hygienic arrangements more effectively carried out. It still contains many miserably constructed houses, badly drained and badly ventilated courts, the supply of water is insufficient, the sewers are often injuriously exposed, and in one or two limited districts the under-soil is saturated with water.

The sewerage of some of the principal streets, though from soil and inclination easily accomplished, is also far from being satisfactory; and the grated openings of the main drains are, in warm weather, the sources of noxious and disgusting effluvia. The suggestion of Professor Sewell, that chimnies should be erected

wherever sewerage openings are necessary, so as at once to convey the gaseous exhalations high into the air, is well worthy of adoption.

We have not been able to trace any evident influence of the church-yards on the developement of fever; nor is it our intention here to estimate the important agencies of an impoverished diet, sedentary occupations, over exertion, and mental anxiety, as causes of disease, but we shall content ourselves with observing, that in its climatic, geological, and physical conditions, very few towns possess greater hygienic advantages than Reading; and were the evils we have referred to materially lessened or removed, the amount of fever might be greatly reduced, and the local standard of health present a still higher superiority.

Scarlatina, and that rather of a severe type, was very equally, though not extensively prevalent, during the autumn and winter months of 1842, 1843, and 1844. The mortality was thirteen out of eighty-four, or one in six and a half.

Measles and small-pox, united, only amount in four years to nine cases, one of which (measles) proved fatal. Both these diseases were limited to the winter quarters. Vaccination, we believe, to be very generally enforced.

Influenza and hooping-cough were the principal epidemic features of 1841; the former in March and April, and pertussis during the summer and autumnal quarters. They almost disappeared during the next three years. Pertussis presents a very high rate of mortality: eleven out of forty, or more than one in four. We are unable to analyze the cause of this.

Though particular epidemic diseases have unequally prevailed, it will be noticed that the total number of cases for each year is more uniform than might *a priori* have been anticipated, as if one class of disturbance either lessened or neutralized another. It may be suspected that there is some close similarity in the exciting causes of all contagiously epidemic diseases, and that while each is specific in its action upon the system, the chemical composition of the poison may be nearly the same. Electricity, moisture, temperature, in their ever-varying combinations, conjoined with geological peculiarities, are the probable determining causes of particular affinities; and hence the possible explanation of why different epidemics are co-existent in different places—why they sometimes succeed each other—are most rife at par-

ticular seasons—are limited to, more frequently renewed in, and more fatal in certain districts—and why one form of disease seems to extinguish or arrest another.

All the enumerated causes of their origin are also influential in modifying the general constitution, and hence another reason of their variable extent and intensity, and also an explanation of a well-ascertained fact, that the health of the whole population is modified during the presence of an epidemic, though only a certain number are susceptible of its specific manifestation.

It is also conceivable how more than one form of disease may be prevalent at the same time, the number and condition of those affected depending upon age and other indefinable constitutional states; and, also, why epidemics have declined in virulence and extent, in proportion as social hygiene has advanced.

The propagation of many epidemics by infection is another reason of their diffusion, while the fact of a disease, originating from without, being capable of transmission and reproduction through the affected system, renders highly probable the *organic nature of the cause,*—requiring in the individual certain conditions for its re-elimination, and evolved as a kind of hybrid of contending vital and chemical re-action.

We do not advance our speculations with any great confidence in their value, but merely emit them as passing thoughts upon an obscure and difficult subject, where the cravings of the intellect must pioneer its information, and where hypothesis, for a long time at least, must occupy the hiatus which our ignorance confessedly leaves.

The total mortality of this group is 30 out of 573, or one in nineteen.

Nervous System.—In the class of nervous affections we find but little occasion for particular remark. A large proportion of cases included under the heads of headache, neuralgia, hysteria, vertigo, cerebral and spinal irritation, are, with few exceptions, but the varied indications of a general condition, essentially allied with diminished constitutional power,—the consequence of all causes inducing physical exhaustion,—and cured by those measures which are adopted to invigorate the general health. They cannot be regarded as distinct diseases, but rather as the accidental or individual manifestation of the constitutional state.

Deficient animal diet we believe to be largely influential in their production; and with females in particular, and those who are not reckoned amongst the poorest classes, nor regarded as objects of charity, the effects of an insufficiently animalized diet are more numerous and important than many, unattached to public institutions, might be willing to admit.

Civilization multiplies the causes of nervous disturbance, and naturally tends to lessen the necessity for depleting treatment. Judging from our experience in this agricultural district, and where the population, generally speaking, may be viewed as favourably situated, we are surprised at the few indications for antiphlogistic measures,—a fact explicable by the circumstances now alluded to, or perhaps to some extent the expression of the ever-changing current of medical opinion.

The mortality under this head is ten, or one in twenty-six.

Respiratory Organs.—The total number of cases is 652, or rather more than one-fifth of the whole medical applicants. Of these, about three-fiths were bronchitis, and rather less than one-fifth consumption, leaving a little more than a remaining fifth for all other conditions united.

In examining the influence of season on the admissions, it will be noticed that bronchitis, pleuropneumonia, emphysema, and asthma, were principally limited to the colder months; but with regard to consumption, a rather singular contrast exists. The greater number of admissions from the latter occur in the spring and summer; and, from a glance at the table, it will be seen that there is rather an inverse proportion, both in the months and years, between the frequency of bronchitis and phthisis.*

* The real agency of *climate* in the developement of phthisis, is very far from being satifactorily ascertained. There is, probably, much more of error than of truth in attributing the disease in Great Britain to the frequent and sudden changes of temperature. In the admirable statistical reports of the army we find, for instance, that in the United Kingdom the mortality among the troops from pulmonary disease is 8 per 1000 annually; in Gibralter, 12 per 1000; in Malta, 6.7; and one-fifth more are invalided there, from pulmonic affections, than in British America. In the civil population of Malta, the deaths of this class were, within a fraction, the same as in Sweden; while in the Ionian Islands, where the climate is subject to remarkable variations, diseases of the lungs were both less prevalent and less fatal than at Malta or Gibralter. A great deal more evidence of a similar nature might be easily adduced, all tending to prove that the causes of phthisis are to be sought for rather in the social than in the climatic conditions of the population.

The influence of bronchitis in the production of phthisis, and the inflammatory origin of the latter, have been long tediously contested, and are still far from extinct questions. But, independently of the evidence now adduced, and which is applicable to both these points, we have hitherto failed in tracing any true pathological or physiological connexion between inflammation or bronchitis as causes of consumption, more than as in common with many other disturbing causes where the constitution is predisposed, they occasionally precede and tend to hasten on tubercular deposition. But that one degenerates into the other, or that there is any nosological relationship between pneumonia, bronchitis, and phthisis, either in their causes, their prognosis, their results, or their treatment, we have never been able to perceive.

Consumption is manifestly a pathological state of the general system, though its most formidable seat, in the majority of cases, is in the lungs; and we anticipate but little fruit from that refinement of *post-mortem* or microscopical research, which seeks to discover the visual evidence of the origin and nature of tubercles. We would not discourage nor ridicule such modes of investigation, nor would we undervalue the high talent and sagacity which have been displayed in the pursuit; but we cannot help expressing our little confidence in the results, and are not conscious that science has hitherto materially widened the extent of our intellectual apprehension of the real nature of the disease.

It is impossible to anticipate the ultimate triumphs that may yet be in reserve; but were the judgment founded upon what has hitherto been effected, notwithstanding the incalculable amount of talent and labour which have converged upon the point, we may, at least, be regarded as evincing an excusable hesitation, if not in unison with those who are more sanguine as to the future.

Regarding tubercular disease as the consequence of nutritive imperfection, and the latter as the expression of a constitutional or vital modification, which innumerable circumstances, hitherto inseparable from civilization, have combined in impressing on the system,—recollecting the hereditary transmission of the organic taint, and the multitudes who are at all times surrounded by influences directly tending to its reproduction and aggravation,—recalling the fact of its developement in every decade of life, and what may be termed its natural evolution at the period when the

organization is in transition from adolescence to puberty;—viewing consumption in combination with these, its wide spreading relationships to human health, we cannot see just grounds for expecting that medicine will ever realize greater success than palliative efficacy, or that hygienic precaution will do more than very partially control the ravages of a disease, the causes of which are so inseparably intertwined with the circumstances attendant upon social existence.

There are those, we are aware, who anticipate an era of disfranchisement from evil, and that, through the agency of a ceaselessly accumulating knowledge; but if we unite in their aspirations for the time when the inhabitant shall not say "I am sick," we cannot for a moment coincide in their estimate of the means by which this glorious consummation is to be attained. So low an appreciation of human power, and such limited anticipations of the coming triumphs of our art, are far, it must be confessed, from being consolatory to man's ambition; but an attentive contemplation of the past, and a candid judgment of the present, we believe, fully justify the impressions entertained, while they cannot but tend to rationalize and sober our future expectations.

Consumption, then, will, we think, be ever a destroying angel in our path, though, from time to time, increasing knowledge and social reform may, perhaps, permit us somewhat to circumscribe its limits, retard its progress, and still further ameliorate the passage to the tomb.

Circulating Organs.—Diseases of this class were in reality more frequent than the fifteen cases reported under that head would seem to imply. With many examples of chronic bronchitis, emphysema, asthma, and rheumatism, various morbid cardiac states were associated, so that the group merely includes those instances where the heart was supposed to be the primary or chief cause of disturbance. We need scarcely remark that the vague term of "palpitatio" is merely indicative of a leading symptom.

Digestive System.—Affections of the digestive organs, especially those implicating the mucous surfaces, form in every rank and condition of life a very numerous class. They are, of all others, the most difficult nosologically to distinguish; and under the terms dyspepsia, gastrodynia, gastro-enteritis, and diarrhœa, it

would be easy in numerous instances to alter the nomenclature. Nowhere can we so easily detect the leading bias of the practitioner as in his mode of designating cases of this description. Congestion or torpor of the liver, gastritic or duodenal inflammation, abdominal plethora, are all centres, round which a vast variety of symptoms may be easily arranged; and in the complicated and indistinct form which chronic disease frequently assumes, the selection of a correct diagnostic term is often most difficult, and frequently but expressive of the more prominent symptom.

A large proportion of the applicants under this head are females, their ailments usually of an atonic character, and mainly attributable to a dietetic origin. Tea, bread, and potatoes, form the chief constituents of their food, and mineral tonics, with opium, are the principal agents of cure. The advantages of meat, with sound beer or porter, when procurable, need not be pointed out. Season does not appear to exert any very decided influence upon the chronic cases, but under the heads of diarrhœa, gastro-enterodynia, and gastro-enteritis, there is a considerable increase in September and October of each year.

Liver.—The sixty-seven cases under the heads of disordered liver and icterus, are too indeterminate to admit of any useful remark.

Kidneys.—Only twenty-three cases of renal affections, and those of a mixed character, are registered. Contrasted with the experience of practitioners in London and some of our larger towns, organic changes of the kidneys are comparatively rare. Bright's disease of these organs is very seldom encountered, and chiefly, if not entirely, restricted to individuals of intemperate habits. Excessive spirit-drinking is by no means extensively prevalent in Reading, and hence, we believe, the great comparative infrequency of renal disorganization.

Generative Organs.—Under the terms of leucorrhœa and amenorrhœa are included symptoms, rather than diseases. In the great majority of cases they may be classed among the indications of an exhausted and impoverished system.

Cutaneous Diseases.—Diseases of the skin present no peculiarities worthy of notice; they are most frequent in the winter and spring quarters.

Diseases of Uncertain Seat.—Whether we are right in comprehending rheumatism in this group, may be questioned; for though the precise condition of the blood which leads to its developement is imperfectly known, yet the tissues which are characteristically affected are now pretty clearly ascertained. Including lumbago, we have 247 cases, or one in fifteen of the whole admissions, or one in thirteen and a half of the medical applicants. This ratio appears large, but it must be remembered that many are admitted more than once; and in every locality where fever is not prevalent the proportion of sub-acute or chronic disease is relatively high, and the health of the district is rather implied than impugned by such a preponderance.

The register has not enabled us to distinguish the acute from the chronic cases, but from our own experience we should say that the latter were very numerous. We do not see reason to conclude that Reading is more obnoxious to rheumatism than many other localities. Out of 666 cases, for example, in the Worcester Infirmary, seventy-one, or one in nine and a half, were rheumatism; in the Dispensary of the same town, the proportion was one in eleven and a half. In the Birmingham Infirmary, we find one in fourteen, one in seventeen, and one in thirty-two, in different years; in the Dispensary of the same town, it is one in fifteen; in the Geneva Hospital, one in thirteen; and in our reports of private practice, it was one in twenty. Out of 1733 medical out-patients of the Berkshire Hospital, the ratio was one in fifteen, while out of 433 medical in-patients, it rises to one in six, the large majority being chronic and county patients.

These proportions are very various and fluctuating from many causes we are unable to analyze, and are merely given as terms of comparison for roughly estimating the probable frequency of the disease in our own locality. Rheumatism is certainly one of the most formidable and distressing diseases to which the poor are liable, and, in a chronic form, too often but very imperfectly remediable by ordinary therapeutic means.

Contrary to what might have been expected, the influence of season is less apparent than for almost any other disease. Comparing the years, it will however be observed, that the total of 1844 is about double that of any preceding year, and the excess seems nearly equally distributed through each quarter.

We have not the materials necessary for an accurate analysis of the cause of this, but cannot doubt its dependence on atmospheric conditions. It has been remarked by Dr. Lombard, that rheumatism of the muscular and nervous textures is more regulated by season than of the articular,—an observation not confirmed by our forty-three cases of lumbago, which appear equally distributed in the warmer and colder months. The question, however, cannot be so easily decided, as variability of climate has probably more influence than the season of the year; and the extent of this can only be determined by tabular daily observation.*

It will be seen that a very large number of cases, (260,) are reported under the terms "Debility," and "Anæmia." The latter includes all examples of chlorosis, but does not essentially differ from the preceding, either in the leading constitutional symptoms or in the treatment. Had the state of the general system always guided diagnosis, this group would have comprehended a large proportion of the cases reported under leucorrhœa, amenorrhœa, neuralgia, hysteria, spinal irritation, and some forms of indigestion and cutaneous disease. But to have boldly adopted such a system, would have exposed us to the charge of indulging in very unwarrantable nosological liberties. At the same time, we must acknowledge a tendency to such a course, and express our conviction of the great practical importance of diagnosing the general rather than the local condition, and deducing the indications of treatment from a careful estimate of the constitutional peculiarities. We are not overlooking either the reality or the importance of local disease and of local treatment; but in a very large number of applicants, at our public institutions particularly, a host of secondary symptoms may be practically disregarded, and numbers of individuals who would be widely separated in a nosological chart, are very closely approximated in therapeutical indications.

* The following facts, from the medical military returns, already referred to, prove the great difficulty of ascertaining the true influence of climate on the prevalence of rheumatism, and might justify the question of whether it exerts any influence at all? In Nova Scotia and New Brunswick, where the climate is exceedingly moist, and the temperature liable to sudden and extreme variations, the admissions to hospital for rheumatic affections have been 30 per 1000 of strength, annually; in Malta and the Ionian Islands, 34; Gibralter, 38; Mauritius, 46; West Indies, 49; United Kingdom, 50; Cape of Good Hope, 57. The problem is a very complicated one, as bad habits of dress and living will more than compensate a good climate.

The true end of our science, after all, is the cure, and not the definition of disease; and the effect of increased experience is to diminish the tendency to symptomatic, and to classify our patients under two or three curative, subdivisions.

It has been said that the great secret of medicine is to know when to pull down and when to build up, and if to this we add the knowledge of when to do nothing, the mystery will be still more completely unfolded. In each of these departments the practitioner must ever be a student; and fortunate for himself and his patients, is the man who has arrived at the most equalized proficiency.

It is satisfactory to find that the direction of recent chemical researches is to increase our power of detecting and treating those general conditions to which we have now referred; to develope, as it were, a leading thought where all would otherwise be experiment and confusion. It is in this department of investigation that we anticipate the greatest boon to practical medicine.

The very large number of our poorer population suffering from general exhaustion of the system—the consequence of insufficient diet, badly arranged dwellings, and all those domestic harrassments which a constant struggle for bare subsistence necessarily involves—is a subject of very painful and serious contemplation.

The track of social progress is ever sown with tears; and if we lift the veil from off the brightest scenes of outward glory, how dark, how threatening is the under current!

We shall not apologize for the irregular and somewhat impulsive nature of our remarks, nor attempt to propitiate the critic's estimate of our imperfections. There is enough of medical formality in print to satisfy the most fastidious; and we have found a satisfaction in scattering our thoughts when and where we pleased, which even the chilling discipline of statistics has not been able to repress.

Though from reports like the present no addition to medical science is at all likely to emanate, nor any novelty to be added to our curative resources, we yet believe them well calculated for local utility, and, if sufficiently multiplied, capable of considerably enlarging our acquaintance with the social condition of our poorer population. Their value is not negatived by the admirable system

of registration now in force, the latter being principally founded upon the analysis and causes of mortality, and therefore necessarily presenting but an imperfect picture of the nature and total amount of disease.

To the practitioner, a knowledge of the morbid peculiarities of his own district, derived from numerical data, cannot fail to be useful and interesting; providing him with a term of comparison not otherwise attainable, and furnishing materials of a far more trustworthy character than those he has accumulated in the dim chamber of unrecorded experience.

With these impressions we have undertaken and fulfilled our task, and now leave it to be condemned or imitated, as its defects or merits may preponderate.

NOSOLOGICAL TABLE.—Part I.

	DISEASES.	1841. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1842. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1843. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1844. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Month. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Year. 1841.	1842.	1843.	1844.	Total.	DISEASES.
Epidemic, Endemic, and Contagious.	Fever	...	3	12	2	2	15	6	3	4	4	2	5	6	5	6	5	3	6	4	4	6	4	7	6	16	7	6	14	9	12	11	5	5	5	4	10	9	5	7	8	7	8	11	6	7	6	7	5	31	20	31	29	21	41	32	18	22	19	20	26	58	62	104	86	310	Fever.
	Scarlatina	...	...	...	...	1	...	...	..	1	...	1	2	...	1	...	...	3	3	1	1	...	6	11	2	1	1	3	2	1	1	1	1	4	6	2	1	3	2	...	1	...	1	3	1	3	10	3	1	4	4	3	3	6	5	5	3	8	22	17	6	5	28	25	28	86	Scarlatina.
	Influenza	...	...	24	22	...	1	...	...	...	...	...	...	...	...	...	...	6	3	...	...	...	...	...	...	1	1	2	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	1	1	27	22	8	4	...	...	...	...	...	1	47	9	6	2	64	Influenza.
	Hooping Cough	...	...	...	...	2	1	4	8	7	5	4	2	1	...	...	...	...	...	...	...	...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	1	...	...	2	1	4	8	9	6	5	2	33	3	2	2	40	Hooping Cough.
	Syphilis	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	3	2	...	1	...	3	...	2	3	...	...	2	2	1	...	1	...	...	1	...	...	1	1	...	...	1	1	...	...	4	2	6	5	3	...	5	6	3	...	4	...	2	10	14	12	38	Syphilis.
	Erysipelas	...	...	...	1	1	...	3	1	...	...	1	...	1	...	1	...	...	...	1	1	1	1	3	1	...	1	...	...	...	...	...	1	...	1	...	2	...	...	...	...	1	...	1	...	...	...	...	...	1	1	1	1	2	1	4	3	2	3	4	3	7	10	5	4	7	Erysipelas.
	Small Pox	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	1	1	...	...	...	1	Small Pox.
	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	Measles.
	Total	1	4	36	26	6	17	13	12	12	9	8	9	8	6	8	5	13	12	8	9	9	12	26	11	22	11	13	19	12	13	14	9	10	12	7	14	13	8	11	10	11	10	15	8	15	17	12	7	44	29	68	60	42	52	50	38	46	50	53	41	153	127	156	137	573	Total.
Nervous System.	Cephalalgia	...	1	...	...	11	...	...	...	...	1	...	...	...	...	1	2	2	3	...	...	...	1	...	...	1	...	...	...	1	...	1	...	...	...	...	...	..	...	1	1	3	3	2	2	...	3	3	...	1	1	2	3	17	6	3	2	...	5	3	...	13	9	3	18	43	Cephalalgia.
	Neuralgia	1	3	1	...	1	...	...	1	...	...	2	...	...	...	1	...	...	...	...	1	1	4	1	1	2	...	1	3	...	...	...	...	...	...	1	1	1	2	2	1	1	...	1	2	...	2	6	4	4	5	3	1	1	2	2	6	2	6	9	9	8	16	42	Neuralgia.
	Hysteria	...	3	...	...	...	...	...	...	1	...	...	1	1	1	1	...	1	...	...	...	...	...	...	1	...	2	2	...	...	2	...	2	...	1	2	...	2	1	1	1	...	1	1	...	...	...	...	...	1	7	4	...	3	3	2	2	2	2	3	3	5	5	11	11	32	Hysteria.
	Vertigo	1	...	...	1	...	...	1	...	...	1	...	...	1	2	...	2	...	...	1	1	...	...	1	...	...	2	...	...	...	...	1	2	...	1	1	...	...	1	1	1	1	1	1	...	...	...	...	2	2	4	1	3	2	1	5	2	1	3	1	2	4	8	10	5	27	Vertigo.
	Cerebral Irritation	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	1	2	1	...	1	...	...	...	1	...	2	...	2	...	1	2	...	2	...	1	1	...	...	...	...	...	...	...	...	...	...	1	4	...	2	1	1	3	1	1	2	2	2	6	9	5	22	Cerebral Irritation.
	Spinal Irritation	...	1	...	4	1	1	...	...	...	1	1	2	2	2	...	...	...	...	...	1	...	...	...	...	...	2	...	1	1	...	2	1	...	1	1	...	1	1	...	...	...	...	...	...	...	...	1	...	2	4	1	1	1	1	2	1	1	2	2	11	5	2	3	21	Spinal Irritation.
	Cerebral Congestion	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	1	...	1	...	3	...	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	4	1	1	2	2	...	1	5	1	...	...	...	1	7	3	6	17	Cerebral Congestion.
	Epilepsy	...	...	...	...	...	...	1	2	...	...	...	...	1	...	3	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	...	1	1	...	...	...	1	1	3	1	1	...	2	5	...	...	1	...	3	6	2	4	15	Epilepsy.
	Paralysis	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	1	1	1	...	2	1	...	...	...	1	...	1	1	...	...	3	3	2	1	...	...	1	3	2	2	3	2	3	6	2	3	9	Paralysis.
	Chorea	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3	1	1	1	...	...	1	...	2	...	...	...	2	2	2	3	9	Chorea.
	Convulsions	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	3	1	5	Convulsions.
	Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	...	...	...	2	...	1	1	...	...	1	2	...	2	5	Encephalitis.
	Hydrocephalus	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	2	...	...	1	...	...	...	...	...	1	2	...	2	5	Hydrocephalus.
	Diseased Brain	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	2	...	...	2	...	2	4	Diseased Brain.
	Total	5	9	2	5	15	1	3	3	1	4	2	6	5	8	9	6	4	4	4	6	2	10	3	2	4	9	5	5	4	3	5	3	4	6	8	6	4	8	7	5	9	7	10	6	5	9	7	5	18	34	22	22	32	15	20	20	16	25	20	19	56	63	62	82	263	Total.
Respiration.	Bronchitis	6	7	16	10	1	6	1	5	3	7	7	15	12	4	7	1	5	2	3	3	4	12	11	5	16	10	10	5	11	4	9	6	6	7	8	11	25	15	15	5	9	4	5	2	3	5	10	12	59	36	48	21	27	16	18	16	16	31	36	43	84	70	103	110	367	Bronchitis.
	Phthisis	5	1	4	3	5	1	3	4	1	4	4	3	4	1	2	6	4	6	4	1	6	1	3	7	2	...	6	6	3	2	1	1	4	4	1	2	2	4	...	3	3	3	3	...	1	2	...	...	13	6	12	18	15	12	11	6	12	11	8	12	38	45	32	21	136	Phthisis.
	Pleuropneumonia	2	2	...	...	1	1	...	...	5	2	...	4	2	2	1	...	2	1	...	1	4	3	1	4	2	4	...	...	2	1	3	...	2	...	2	3	3	1	...	1	1	...	3	...	3	4	4	2	...	8	3	4	2	11	8	3	11	17	18	19	16	70	Pleuropneumonia.
	Pleurodynia	...	...	1	...	...	1	1	1	...	1	...	2	...	1	...	2	1	...	...	1	...	...	...	...	1	1	2	1	...	1	1	...	1	...	1	...	...	1	2	...	...	...	1	1	...	...	2	...	1	3	5	3	1	2	3	2	2	1	3	2	2	5	7	9	7	28	Pleurodynia.
	Emphysema	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1	1	...	...	2	...	...	1	2	1	...	1	1	...	...	...	...	1	1	...	...	1	...	...	...	...	...	3	...	1	...	...	2	2	...	...	3	1	...	...	6	1	2	2	2	5	6	6	19	Emphysema.
	Asthma	2	...	1	...	...	...	...	1	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	1	5	...	1	2	...	1	1	1	...	...	1	1	2	4	4	2	4	14	Asthma.
	Hæmoptysis	...	1	1	...	1	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2	2	1	1	1	1	...	...	...	...	5	1	...	2	8	Hæmoptysis.
	Laryngitis	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	2	1	2	...	5	Laryngitis.
	Aphonia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	1	2	...	...	...	...	...	...	1	3	1	5	Aphonia.
	Total	15	11	23	14	8	10	7	11	10	14	11	25	20	9	11	10	13	10	7	5	17	16	16	18	23	16	18	13	17	13	14	7	13	13	13	16	31	22	19	10	17	7	10	4	7	10	14	16	84	53	71	47	56	40	39	26	47	53	54	72	159	150	176	167	652	Total.
Circulation.	Diseased Heart	...	1	...	2	...	2	2	...	2	...	1	1	...	1	1	1	4	...	2	2	...	...	1	...	1	...	...	...	...	2	2	2	...	1	1	...	...	3	1	2	2	1	1	1	3	2	...	1	1	5	2	5	6	5	7	5	5	5	3	2	11	12	9	17	49	Diseased Heart.
	Palpitation	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	1	...	1	2	...	2	...	1	...	1	1	...	1	1	3	5	9	Palpitation.
	Pericarditis	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2	...	1	...	1	...	1	...	1	1	3	1	2	1	7	Pericarditis.
	Total	...	1	1	2	1	2	3	...	3	...	1	1	...	1	1	2	4	...	2	2	...	...	1	...	1	1	1	1	1	2	2	2	...	1	1	1	...	3	2	2	2	1	2	1	4	3	1	2	1	6	5	7	8	5	9	5	7	6	4	4	15	13	14	23	65	Total.
Digestion.	Dyspepsia	8	5	2	1	4	4	3	2	7	3	2	1	5	2	3	1	2	9	3	2	4	3	3	5	2	3	4	3	5	2	3	1	5	4	2	1	3	3	3	8	2	8	6	3	2	1	1	2	18	13	12	13	13	20	15	8	18	11	8	12	42	39	38	32	151	Dyspepsia.
	Diarrhœa	1	...	2	...	...	1	...	...	...	5	7	2	3	1	2	...	3	1	2	3	7	5	3	4	2	1	...	7	4	3	...	1	6	9	3	3	2	4	4	2	3	1	2	5	6	...	2	4	8	6	8	4	10	6	4	9	19	19	15	13	18	34	34	35	121	Diarrhœa.
	Gastro-enterodynia	5	2	...	2	1	...	3	4	5	2	1	2	...	1	...	3	1	3	2	1	3	4	...	...	...	...	3	4	4	2	2	2	3	5	1	3	1	2	1	2	1	3	6	2	5	6	3	3	6	5	6	11	6	8	13	9	16	17	5	8	27	18	31	34	110	Gastro-enterodynia.
	Constipation	...	2	2	2	...	1	2	1	1	4	2	...	2	...	1	1	3	...	4	8	2	3	3	1	3	2	...	6	...	2	2	...	4	4	3	1	1	3	2	1	1	3	4	3	2	1	1	3	8	6	3	13	5	3	12	12	9	12	9	5	17	28	27	25	97	Constipation.
	Gastro-enteritis	2	2	1	1	1	2	4	...	2	...	2	2	2	1	2	3	2	1	3	3	2	6	2	...	1	1	3	...	4	1	3	4	7	2	...	4	...	...	1	1	4	2	5	1	4	4	1	...	5	4	7	5	11	6	15	8	15	12	5	5	19	27	30	23	99	Gastro-enteritis.
	Gastritis	1	...	...	1	2	2	...	1	2	...	...	...	...	...	...	1	1	1	...	1	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	1	...	...	1	2	...	...	...	...	2	1	1	2	3	5	4	2	2	...	1	1	...	9	5	3	5	22	Gastritis.
	Worms	...	...	1	1	1	...	1	2	...	...	...	1	...	...	...	...	1	...	...	...	1	...	1	...	1	...	1	1	1	...	1	1	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	2	...	3	4	2	...	2	4	1	2	1	1	7	3	8	4	22	Worms.
	Peritonitis	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	3	1	1	...	1	1	...	1	...	...	...	1	2	3	3	9	Peritonitis.
	Vomiting	...	1	1	1	1	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2	1	2	...	1	...	...	...	7	...	...	2	9	Vomiting.
	Tympanitis	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	1	...	...	1	3	2	6	Tympanitis.
	Colica Pictonum	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	1	3	...	...	1	...	2	2	5	Colica Pictonum.
	Total	17	12	9	9	10	12	15	10	19	14	14	8	14	6	9	10	12	15	14	19	18	22	13	10	11	8	12	21	19	11	14	9	26	26	9	12	11	12	11	18	12	16	26	14	20	15	8	12	53	38	43	53	53	51	69	52	83	77	44	65	149	159	178	165	651	Total.

NOSOLOGICAL TABLE.—Part II.

	DISEASES.	1841. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1842. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1843. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1844. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Month. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Year. 1841.	1842.	1843.	1844.	Total.	DISEASES.
Liver.	Disordered Liver	1	2	2	...	2	...	2	...	2	...	...	1	...	1	...	5	2	...	2	3	...	2	...	...	1	1	1	...	...	4	1	1	...	2	1	...	3	2	1	...	1	1	4	...	3	...	1	...	7	6	4	5	5	5	9	4	5	5	2	1	12	15	12	16	55	Disordered Liver.
	Icterus	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	3	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	1	3	...	...	1	4	1	...	...	2	5	3	2	12	Icterus.
	Total	1	2	2	...	3	...	2	1	2	...	...	1	...	1	...	5	4	...	2	3	3	2	...	...	2	1	1	1	...	4	1	1	1	2	1	...	3	2	2	...	1	1	4	...	3	1	1	...	8	6	5	6	8	5	9	5	9	6	2	1	14	20	15	18	67	Total.
Urinary Organs.	Renal Irritation	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	1	...	1	...	...	2	1	...	...	1	2	...	3	1	1	1	...	3	1	4	4	12	Renal Irritation.
	Diseased Kidneys	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	1	...	...	1	1	1	4	7	Diseased Kidneys.
	Nephritis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	1	1	1	4	Nephritis.
	Irritable Bladder	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	1	...	...	1	...	...	...	...	...	1	...	...	1	1	2	Irritable Bladder.
	Diseased Bladder	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	1	3	Diseased Bladder.
	Hæmaturia	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	3	Hæmaturia.
	Dysuria	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	3	Dysuria.
	Incontinence	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	Incontinence.
	Total	3	1	1	...	1	1	1	2	3	3	...	...	...	...	1	...	1	...	1	...	3	...	1	2	2	2	2	...	1	...	...	1	2	...	1	...	...	...	3	2	1	1	...	2	...	2	1	...	5	3	7	2	4	2	2	5	8	5	3	2	16	9	11	12	48	Total.
Organs of Generation.	Leucorrhœa	3	1	1	...	2	...	...	...	...	...	...	...	...	...	2	...	...	1	1	...	1	...	...	2	1	...	2	1	1	2	1	1	3	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	4	1	5	1	3	4	3	1	6	...	...	3	7	7	12	5	31	Leucorrhœa.
	Menorrhagia	...	...	2	3	2	1	...	1	...	1	1	...	...	1	1	1	...	...	...	1	1	1	...	...	2	1	1	2	1	1	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	4	5	4	1	2	4	2	1	1	1	11	6	5	4	26	Menorrhagia.
	Amenorrhœa	1	1	1	2	...	1	...	2	...	1	...	1	...	...	...	...	...	...	1	...	1	...	...	...	1	1	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	1	2	2	2	1	4	1	1	1	2	10	2	3	6	21	Amenorrhœa.
	Metritis	...	1	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1	1	...	...	1	3	4	...	1	4	1	4	14	Metritis.
	Abortio	1	...	...	...	2	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	2	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	2	1	...	1	1	1	...	1	2	1	1	...	4	2	4	...	10	Abortio.
	Irritable Uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	5	9	Irritable Uterus.
	Cancer Uteri	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	1	1	1	...	1	...	...	...	...	...	1	...	...	1	3	Cancer Uteri.
	Ovarian Dropsy	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	Ovarian Dropsy.
	Total	5	4	5	6	6	2	...	4	...	1	3	2	...	2	4	1	...	2	1	2	3	3	...	2	4	1	2	1	3	2	4	5	6	...	2	1	1	...	1	2	5	2	2	5	1	3	2	2	10	7	12	10	13	8	8	14	15	8	3	7	38	20	31	26	115	Total.
Skin.	Impetigo	...	1	...	3	2	...	2	...	3	...	...	1	2	3	3	...	...	2	...	2	...	...	1	1	...	1	...	2	5	1	1	2	...	3	1	1	...	...	2	...	...	2	1	...	2	1	3	1	2	5	5	5	7	5	4	4	5	4	5	4	12	14	17	12	55	Impetigo.
	Eczema	...	...	2	1	2	1	1	...	...	2	...	1	1	1	1	1	...	1	3	2	...	2	1	...	1	1	...	1	1	...	...	1	...	2	1	...	3	...	1	2	...	2	2	...	2	...	...	2	4	2	4	4	3	3	4	3	6	1	4	3	9	14	41	Eczema.
	Scabies	6	...	...	...	...	1	1	...	...	1	...	1	2	3	...	2	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	9	3	1	2	...	1	1	1	...	2	3	1	10	8	4	2	24	Scabies.
	Prurigo	...	...	...	...	...	1	...	...	...	...	...	...	...	1	2	1	...	...	...	...	1	1	...	1	...	...	...	...	...	5	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	...	2	1	2	1	...	6	1	...	2	1	...	1	...	1	1	5	4	17	Prurigo.
	Urticaria	...	...	...	...	...	1	2	...	...	...	...	...	1	...	2	...	...	...	1	1	...	2	...	...	...	...	...	1	...	...	1	1	...	2	...	...	...	...	...	...	...	1	...	...	...	...	1	...	2	...	3	1	1	3	2	1	2	...	1	...	...	4	4	6	2	16	Urticaria.
	Erythema	...	...	1	1	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	4	1	1	4	...	2	1	1	1	1	1	4	4	5	3	16	Erythema.
	Psoriasis	...	1	...	...	...	1	...	...	...	...	1	1	...	...	...	...	2	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	1	1	...	1	2	2	4	4	3	...	11	Psoriasis.
	Porrigo	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	...	1	3	...	...	2	1	1	3	2	5	11	Porrigo.
	Boils	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	1	1	...	1	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	1	1	3	1	...	...	1	...	1	1	...	1	...	4	5	1	19	Boils.
	Lepra	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...	...	1	2	...	1	1	...	1	...	1	1	1	2	...	4	8	Lepra.
	Acne	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	1	2	...	...	...	1	1	...	...	2	3	2	7	Acne.
	Lichen	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	2	...	2	4	Lichen.
	Pityriasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	1	2	...	3	Pityriasis.
	Ecthyma	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	1	1	1	2	Ecthyma.
	Pompholyx	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	Pompholyx.
	Not specified	...	3	1	...	2	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	4	1	...	2	...	...	1	1	1	1	1	6	1	1	3	11	Not specified.
	Total	6	6	7	6	8	5	6	2	3	1	3	5	8	10	11	5	3	5	2	6	5	2	5	4	4	3	4	5	8	8	3	7	4	7	2	3	7	1	6	2	1	6	4	3	7	3	11	4	25	20	28	18	20	23	16	18	19	13	21	16	58	66	58	55	236	Total.
Of Uncertain Seat.	Rheumatism	4	7	3	4	3	4	5	2	1	1	3	3	1	4	4	...	1	2	3	3	5	7	2	2	3	4	5	3	8	4	...	6	4	1	6	...	6	11	6	8	7	7	7	5	7	5	9	8	14	26	18	15	19	17	15	16	17	14	20	13	40	34	44	86	204	Rheumatism.
	Lumbago	...	...	...	...	...	1	...	...	...	1	1	...	1	2	2	1	...	1	1	1	...	...	1	...	...	...	2	2	2	5	...	3	1	...	2	1	...	1	1	2	...	...	...	...	1	1	4	2	1	3	5	5	2	7	1	4	2	2	8	3	3	10	18	12	43	Lumbago.
	Debilitas	2	...	1	3	2	2	1	7	1	2	2	1	2	3	6	4	3	3	2	2	1	...	2	2	2	1	5	6	8	6	6	7	5	...	...	1	2	5	1	5	7	2	2	4	3	3	2	2	8	9	13	18	20	13	11	20	10	5	6	6	24	30	47	38	139	Debilitas.
	Anæmia	3	1	3	1	...	1	3	2	3	3	2	...	1	2	2	1	2	2	1	...	2	4	1	5	4	1	4	...	3	4	...	5	4	9	5	2	2	4	2	4	4	4	3	3	2	3	1	1	10	7	9	8	10	10	7	11	10	19	10	10	22	23	41	35	121	Anæmia.
	Struma	...	...	...	2	...	1	1	...	1	1	...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...	1	...	...	3	1	...	1	...	...	1	...	...	...	2	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	1	...	...	3	...	...	6	3	7	3	19	Struma.
	Cachexia	...	...	2	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	2	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	5	1	...	2	...	1	...	...	3	...	...	4	4	3	1	12	Cachexia.
	Gout	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	1	...	1	1	...	1	...	...	...	...	1	3	2	1	7	Gout.
	Œdema	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	...	...	...	2	...	...	2	4	Œdema.
	Purpura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	2	Purpura.
	Plethora	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	2	Plethora.
	Total	9	9	9	11	8	10	10	11	6	8	8	4	5	11	16	9	8	8	7	8	8	11	8	9	9	6	19	11	21	24	7	22	15	10	13	5	10	21	10	21	18	13	13	12	13	16	18	13	33	46	52	54	56	53	38	54	41	45	48	33	103	108	162	180	553	Total.

NOSOLOGICAL TABLE.—Part III.

	DISEASES.	1841. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1842. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1843. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1844. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Month. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Year. 1841.	1842.	1843.	1844.	Total.	DISEASES.
Omitted.	Cynanche	1	2	1	...	1	...	...	1	1	1	...	1	...	1	2	...	1	1	1	...	1	2	3	...	2	...	...	1	1	1	...	1	1	1	1	...	1	...	...	...	2	2	1	...	1	1	2	2	4	3	3	1	5	4	2	2	4	5	6	3	9	12	9	12	42	Cynanche.
	Dentition	...	...	1	...	...	...	...	...	3	...	...	...	1	1	3	...	1	3	...	...	1	...	...	...	...	...	4	...	3	...	1	2	1	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	1	1	...	8	...	4	3	2	5	1	...	4	10	11	3	28	Dentition.
	Epistaxis	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...	1	...	1	2	1	1	5	Epistaxis.
	Total	1	2	2	...	1	...	...	1	4	1	1	1	1	2	5	...	4	4	1	...	2	2	3	...	2	...	4	1	4	2	1	3	2	1	1	...	1	...	...	...	3	2	3	...	1	2	2	2	5	4	3	9	8	9	5	5	6	10	8	3	14	24	21	16	75	Total.
Surgical.	Injuries	4	4	3	4	2	2	...	...	...	5	4	4	5	2	4	2	...	1	1	2	1	...	1	3	3	3	1	1	2	1	2	1	2	1	2	1	...	2	4	4	3	4	2	3	1	1	...	1	12	11	12	11	7	8	5	6	4	7	8	9	32	22	20	26	100	Injuries.
	Ophthalmia	7	2	...	1	...	2	1	3	1	...	2	1	3	2	1	2	1	...	2	3	1	...	1	3	4	4	3	1	2	2	2	1	...	...	1	4	...	...	...	2	3	1	...	2	4	...	1	2	11	8	4	5	6	5	5	8	7	...	5	9	20	21	24	15	80	Ophthalmia.
	Abscess	2	3	2	2	2	1	4	2	...	...	...	1	2	5	1	4	2	...	...	2	3	...	1	1	1	3	1	2	1	2	1	2	1	...	1	...	3	1	2	2	1	...	1	...	3	1	2	1	7	12	4	9	8	3	5	5	7	3	4	5	19	21	18	14	72	Abscess.
	Ulcers	1	2	1	1	1	1	3	1	...	1	2	2	1	2	1	1	1	...	1	1	4	1	3	1	...	2	1	4	...	...	1	...	1	2	...	3	...	...	1	...	...	4	2	...	3	1	1	1	2	6	4	6	2	5	7	2	8	5	6	7	16	17	14	13	60	Ulcers.
	Hernia	...	1	...	...	1	...	...	2	...	2	2	...	...	1	...	...	1	...	1	...	...	...	...	...	1	1	...	...	1	...	...	...	...	1	1	1	...	...	...	1	1	2	3	1	...	1	1	...	1	3	...	1	3	2	5	2	...	4	4	1	8	3	5	10	26	Hernia.
	Diseased Testicle	...	...	...	...	1	...	...	...	...	...	1	1	...	...	1	...	1	...	...	...	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	1	1	...	2	3	1	...	...	...	...	2	...	3	3	3	4	2	5	14	Diseased Testicle.
	Prolapsus Uteri	...	1	...	...	...	2	...	1	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	1	...	2	...	2	3	2	...	...	6	1	1	3	11	Prolapsus Uteri.
	Sore Nipples	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	2	...	...	...	...	2	...	1	1	...	2	1	5	Sore Nipples.
	Stricture	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	...	...	2	1	...	3	Stricture.
	Stone	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	1	...	3	Stone.
	Cancer of Breast	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	1	2	Cancer of Breast.
	Total	14	13	7	8	7	8	8	10	3	9	11	9	12	12	8	9	6	1	5	9	9	2	7	10	10	14	6	9	8	6	5	4	4	7	5	11	3	3	5	11	8	11	9	6	15	4	6	6	36	43	29	34	27	26	28	27	32	21	31	35	107	92	89	88	376	Total.

GENERAL SUMMARY OF THE PRECEDING TABLE.

DISEASES.	1841. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1842. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1843. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	1844. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Month. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals in each Year. 1841.	1842.	1843.	1844.	Total.	
Epidemic, Endemic, & Contagious	1	4	36	26	6	17	13	12	12	9	8	9	8	6	8	5	13	12	8	9	9	12	26	11	22	11	13	19	12	13	14	9	10	12	7	14	13	8	11	10	11	10	15	8	15	17	12	7	44	29	68	60	42	52	50	38	46	50	53	41	153	127	156	137	573	
Nervous System	5	9	2	5	15	1	3	3	1	4	2	6	5	8	9	6	4	4	4	6	2	10	3	2	4	9	5	5	4	3	5	3	4	6	8	6	4	8	7	5	9	7	10	6	5	9	7	5	18	34	22	22	32	15	20	20	16	25	20	19	56	63	62	82	263	
Respiration	15	11	23	14	8	10	7	11	10	14	11	25	20	9	11	10	13	10	7	5	17	16	16	18	23	16	18	13	17	13	14	7	13	13	13	16	31	22	19	10	17	7	10	4	7	10	14	16	84	53	71	47	56	40	39	26	47	53	54	72	159	150	176	167	652	
Circulation	...	1	1	2	1	2	3	...	3	..	1	1	...	1	1	2	4	...	2	2	...	...	1	...	1	1	1	1	1	2	2	2	...	1	1	1	...	3	2	2	2	1	2	1	4	3	1	2	1	6	5	7	8	5	9	5	7	6	4	4	15	13	14	23	65	
Digestion	17	12	9	9	10	12	15	10	19	14	14	8	14	6	9	10	12	15	14	19	18	22	13	10	11	8	12	21	19	11	14	9	26	26	9	12	11	12	11	18	12	16	26	14	20	15	8	12	53	38	43	53	53	51	69	52	83	77	44	65	149	159	178	165	651	
Liver	1	2	2	...	3	...	2	1	2	...	...	1	...	1	...	5	4	...	2	3	3	2	...	...	2	1	1	1	...	4	1	1	1	2	1	...	3	2	2	...	1	1	4	...	3	1	1	...	8	6	5	6	8	5	9	5	9	6	2	1	14	20	15	18	67	
Urinary Organs	3	1	1	...	1	1	1	2	3	3	...	...	...	...	1	...	1	...	1	...	3	...	1	2	2	2	2	...	1	...	...	1	2	...	1	...	...	...	3	2	1	1	...	2	...	2	1	...	5	3	7	2	4	2	2	5	8	5	3	2	16	9	11	12	48	
Organs of Generation	5	4	5	6	6	2	...	4	...	1	3	2	...	2	4	1	...	2	1	2	3	3	...	2	4	1	2	1	3	2	4	5	6	...	2	1	1	...	1	2	5	2	2	5	1	3	2	2	10	7	12	10	13	8	8	14	15	8	3	7	38	20	31	26	115	
Skin	6	6	7	6	8	5	6	2	3	1	3	5	8	10	11	5	3	5	2	6	5	2	5	4	4	3	4	5	8	8	3	7	4	7	2	3	7	1	6	2	1	6	4	3	7	3	11	4	25	20	28	18	20	23	16	18	19	13	21	16	58	66	58	55	237	
Of Uncertain Seat	9	9	9	11	8	10	10	11	6	8	8	4	5	11	16	9	8	8	7	8	8	11	8	9	9	6	19	11	21	24	7	22	15	10	13	5	10	21	10	21	18	13	13	12	13	16	18	13	33	46	52	54	56	53	38	54	41	45	48	33	103	108	162	180	553	
Omitted	1	2	2	...	1	...	...	1	4	1	1	1	1	2	5	...	4	4	1	...	2	2	3	...	2	...	4	1	4	2	1	3	2	1	1	...	1	...	...	...	3	2	3	...	1	2	2	2	5	4	3	9	8	9	5	5	6	10	8	3	14	24	21	16	75	
Surgical	14	13	7	8	7	8	8	10	3	9	11	9	12	12	8	9	6	1	5	9	9	2	7	10	10	14	6	9	8	6	5	4	4	7	5	11	3	3	5	11	8	11	9	6	15	4	6	6	36	43	29	34	27	26	28	27	32	21	31	35	107	92	89	88	376	
Grand Total	77	74	104	87	74	67	68	67	66	64	61	70	73	68	83	62	75	61	54	69	85	82	83	68	94	72	89	87	98	88	70	73	87	82	63	69	83	80	77	83	88	77	98	61	91	85	83	69	322	289	345	322	327	289	293	319	329	319	291	278	882	851	973	969	3675	Grand Total.

A

STATISTICAL REPORT

OF THE

SURGICAL IN-PATIENTS

OF THE

ROYAL BERKSHIRE HOSPITAL,

FROM ITS ESTABLISHMENT, MAY, 1839, TO MAY, 1845,

READ AT THE ANNIVERSARY MEETING OF THE SOUTHERN BRANCH OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION, HELD AT READING, THURSDAY, JUNE 26, 1845.

BY GEORGE MAY,

Fellow of the Royal College of Surgeons, London, Surgeon to the Royal Berkshire Hospital.

The Royal Berkshire Hospital was opened for the reception of patients, May 27, 1839. The following Report comprises the surgical in-patients during the five years ending May, 1845; with a tabular arrangement of cases, and brief remarks on the more important operations. For the veracity of the data, derived from the Hospital books and the reports published annually, your reporter claims a credence due to official records; for the opinions expressed he is individually responsible.

Although the total is but a scanty statistical fragment, he ventures to hope that it may stimulate others to contribute an aggregate from which may be drawn legitimate inferences and safe rules of practice.

FRACTURE OF THE THIGH. (See Table II.)

The results of both methods of treatment have been satisfactory. The feeling of security and comfort enjoyed by the patient, the comparatively slight attention required after its adjustment, and the speedier restoration of the use of the limb, are some of the decided advantages of the straight position. The revolving bed may be made available also to the prevention of much discomfort and distress, especially to the aged and the feeble

The apparatus should not be applied too early, and care is needful to prevent injurious pressure, by ample coverings of bandage and pads of chaff or bran.

FRACTURE OF THE LEG. (See Table III.)

The swing cradle is a valuable addition to the fracture apparatus. It secures an elevated posture, enables the patient to leave the bed a few days after the accident, and facilitates transport when required.

TUMOURS. (See Table XVII.)

Erectile tumours, or nævi, two. Both were congenital, or observed soon after death, sub-cutaneous, highly vascular, and rapidly extending. One involved nearly the whole of the lower lip. Vaccination having failed, an incision was made through the integuments at each angle of the lip, meeting at the chin, and the whole encircled by ligature. The deformity is very slight, and may be removed by a supplementary operation similar to that for hare-lip. The other case of nævus involved nearly the whole of the left side of the face. It was treated first by vaccination, which failed. A seton-thread was passed through successive portions of its structure, which excited adhesive inflammation, and promised eventual success. The removal of the child interrupted further treatment.

The case of encephaloid carcinoma, from which a duplicate cast was taken after death, commenced in the conjunctiva, at its angle of reflection, presenting the appearance of simple fungus. It was freely removed, and progressed favourably for a few weeks. On the patient's return to the Hospital, the tumour had reappeared,

and had attained the size of a hen's egg. Extirpation of the globe was proposed, but refused. On examination *post mortem,* the disease was found limited to the orbital appendages, the globe atrophied, the brain not involved.

One case of encysted tumour was interesting, from its large size. It occupied the back of the neck, and encroached considerably on the occiput. The cyst was very dense, and contained ten ounces of albuminous fluid. Suppurative inflammation was excited by seton, the cyst became detached in large masses, and the entire tumour was removed.

LITHOTOMY. (See Table XVIII.)

The straight staff was used in one case, and the curved staff with oblique groove in the other. The chief points of the operation intended to be kept in view were, to make a free incision of the integuments and superficial fascia, extending considerably beyond the margin of the anus; to separate the deeper tissues with the finger, and, guarded by it, to make a small opening into the groove of the staff, through the posterior part of the urethra and prostate. A small knife sufficed for both incisions. In each case the calculus was readily grasped, and extracted with an ordinary polypus-forceps.

The operation thus completed was simple, and successful in two cases. In one it was unfortunately fatal. This patient had been imperfectly secured, and was quite unmanageable. In attempting to proceed with the operation, the finger passed beyond the prostatic fascia, and the bladder was opened behind it: infiltration of urine was the result, followed by diffuse inflammation of the cellular membrane. Examination *post mortem* disclosed purulent infiltration generally throughout the pelvis.

AMPUTATIONS. (See Tables XIX. and XX.)

No untoward accident occurred in any case. Weiss's arched tourniquet was sometimes used, and answered well; but compression of the artery by the thumb was generally preferred. The after-treatment was concluded in the manner described by Professors Liston and Fergusson. Secondary hæmorrhage occurred in one

case on the ninth day; the stump was opened, and the artery secured by ligature; the bleeding did not recur.

The five fatal cases were of amputations above the knee, for severe compound fractures. Four were primary; one secondary.

1. John Leach, labourer, aged fifty-seven. Compound, comminuted fracture of the right femur into the knee-joint. Run over by a loaded waggon. Amputation, five hours after the accident. Died, forty hours after the operation. Cause of death,—shock.

2. William Jones, aged fifteen. Compound fracture of the leg. Amputation immediate. Cause of death,—shock and loss of blood before admission.

3. William Parker, carpenter, aged thirty-four. Compound, comminuted fracture of the tibia and fibula. Amputation on the ninth day. Died twelve days after the operation. *Post-mortem* refused.

4. John Withers, carter, aged thirty. Compound, comminuted fracture of the tibia and fibula of the left leg. Amputation, twenty-four hours after the accident. Died fourteen days after the operation. Examination, forty two hours *post mortem*. Lungs congested posteriorly; left lung compressed; a large quantity of sero-purulent fluid in both pleural cavities; diffused abscess in the calf of the right leg.

5. Stephen Pearson. (See amputation table.)

The total number of cases of amputation is too small to justify conclusions from a comparison of primary with secondary operations, or the circular mode of operating with the flap. The general results bear a favourable comparison with previous records, the average mortality being one in seven, including primary, secondary, and for disease, and of both the upper and lower extremities.

The fatal cases have been limited to the thigh, and for accidents; those on the thigh for disease, and all the operations on the leg and the arm, including the shoulder-joint, having recovered. (See tables on the comparative mortality after amputation, by Dr .Inman, in the *Lancet* for October 5, 1844.)

AMPUTATION AT SHOULDER-JOINT.

(See Table XIX.)

One of the cases was operated on by the late Mr. Samuel Young, of Reading, and is reported in the *London Medical Gazette*, vol. xxxi. One was a gun-shot injury of the humerus and shoulder-joint; admission to the Hospital immediate, and operation soon after. The third was a severe burn of the fore and upper arm. In both the latter, a flap was made of the deltoid; by transfixion in one, and in the other, from without inwards. An assistant behind the patient raised the flap, and secured the circumflex artery. The joint being opened, and the capsular ligament freely divided, a narrow catling was passed behind the head of the bone, and, sweeping along its surface, cut out near the centre. The vessels were readily secured, with the slightest possible hæmorrhage. A shield of stiff paste-board defended the chest, enabling the arm to be drawn freely across it, and permitted a rapid severance of the limb.

STRANGULATED HERNIA. (See Table XXI.)

In all cases of strangulated hernia, the strictured parts should be liberated without delay. If from any cause delay have occurred, and the parts be tender, or in risk of sphacelus, the *operation* should be performed forthwith, without previous attempt at reduction by other means. In cases which would seem to justify the taxis, it should be carefully and judiciously attempted *once only*, the patient having been placed previously in the most favourable state for its trial. This state is relaxation, general and local; the former being induced by such means as do not permanently diminish power, and are adapted to the age and the other concomitant conditions; and the latter, by well-regulated posture. If, thus conducted, the taxis fail of success, the operation is demanded without further loss of time.

Reduction of strangulated hernia has been effected by a great variety of means, and this has induced the employment of many in succession, with the hope of averting operative interference. Without enumerating them, or attempting a comparative estimate

of their value, I venture to submit that the greatest ratio of success will follow their almost entire abandonment. The patient may be brought to the side of the bed, the stricture be divided, and the whole completed, in little more time than is required for an ordinary venesection.

Much evil has resulted by exciting the fear of a dangerous operation, and by the distressing ceremonies of preparation. The strictured parts having been liberated, and the wound adjusted, the utmost quietude is needful, the after-treatment being essentially soothing. The cardinal points, in brief, are *early* operation and *sedative* after-treatment, to the exclusion of multiplied appliances and manipulations before operation, and disturbing agencies, especially of purgatives, afterwards. (See papers by Mr. Macilwain, recently published in the *Lancet.*)

Table I.—SUMMARY OF SURGICAL CASE

NATURE OF CASE.	1st Year. 1839–40.	2nd Year. 1840–41.	3rd Year. 1841–42.	4th Year. 1842–43.	5th Year. 1843–44.	Total.
Abscess	8	4	16	16	16	60
Amaurosis	4	2	8	2	3	19
Aneurism	1	1	1	...	...	3
Ankle, Diseased	3	7	1	3	1	15
Arm, Diseased	2	2	...	...	...	4
Burns and Scalds...	5	5	6	11	5	32
Bitten by Dog	2	1	...	...	...	3
——— by Adder	...	...	...	1	...	1
Bladder, Diseased	2	4	1	...	...	7
Carcinoma	1	1	...	3	1	6
——— of Stomach...	...	...	1	...	...	1
Contusions	23	5	20	12	31	91
Concussion of Spinal Marrow ...	5	3	2	...	...	10
Cataract...	2	3	3	2	1	11
Dislocation of Hip	1	1	...	...	...	2
——— Shoulder	...	...	4	1	1	6
——— Radius	1	...	...	1	...	2
——— Great Toe	...	...	...	1	1	2
Elbow, Diseased	...	...	...	...	2	2
Eyes, Injuries of	4	3	...	...	...	7
——, Diseases of...	6	11	17	21	26	81
Fistula, Anal	1	3	3	5	6	18
——— Lachrymalis	...	1	1	2	...	4
Foot, Distorted	...	2	...	...	...	2
Fracture of Leg	14	16	12	11	5	58*
——— Clavicle	1	...	2	...	2	5
——— Skull...	3	...	3	2	1	9†
——— Ribs	2	2	1	1	...	6
——— Fore-arm	3	2	5	5	3	18‡
——— Vertebra	1	1	1	1	1	5
——— Humerus	2	4	5	2	...	13§
——— Fingers	2	1	1	3	1	8
——— Thigh	2	8	3	5	2	20‖
——— Sternum	1	...	...	...	...	1
——— Scapula	2	...	...	...	1	3
——— Patella	...	...	1	1	...	2
——— Jaw	...	...	...	1	1	2¶
——— Foot	...	...	...	1	3	4
Carried forward	104	93	118	114	114	543

* Simple, 45; Compound, 9; Comminuted, 4.
† Compound, 6; Simple, 3.
‡ Simple, 16; Compound, 2.

TOTAL DEATHS ... ... 53.—

BEING F

Burns	8
Fractures	12
Lacerations and Contusions	5
Injuries of the Head	7
Injuries of the Spine	5
Diseases of the Leg	4
Hernia	2

S, FROM MAY, 1839, TO MARCH, 1844.

NATURE OF CASE.	1st Year. 1839–40.	2nd Year. 1840–41.	3rd Year. 1841–42.	4th Year. 1842–43.	5th Year. 1843–44.	TOTAL.
Brought forward	104	93	118	114	114	543
Fracture of Pelvis	...	...	...	...	1	1
Fungus Hæmatodes	...	...	1	...	...	1
Hare-Lip	...	3	1	1	1	6
Hernia	...	2	3	4	7	16
Hydrocele	...	...	1	1	2	4
Hæmorrhoids	...	...	...	2	...	2
Hip, Diseased	9	12	10	7	8	46
Head, Injuries of	7	1	...	...	...	8
Knee, Injuries of	...	2	4	5	...	11
——, Bursal Swelling	...	...	...	...	2	2
——, Diseased	10	11	7	20	21	69
——, Contractions of...	4	...	...	...	3	7
Leg, Gangrene of	1	...	...	...	...	1
Lupus	...	...	...	2	2	4
Nævus	...	1	...	1	1	3
Necrosis	2	3	7	...	6	18
Polypus	1	2	1	1	1	6
Psoas Abscess	1	2	...	2	...	5
Strictures	4	...	1	3	5	13
Stone	...	2	1	4	4	11
Syphilis	6	8	7	7	3	31
Staphyloma	2	...	...	...	...	2
Spinal Curvature...	...	...	3	...	1	4
Spine, Diseased	5	10	2	2	3	22
——, Injuries of	4	1	1	5	...	11
Shoulder, Diseased	...	...	...	1	...	1
Talipes Varus and Equinus... ...	2	1	...	1	...	4
Tumours	...	4	6	5	8	23
Urine, Retention of	...	2	4	3	2	11
——, Incontinence of	...	...	...	...	2	2
Uterine Diseases	4	7	5	6	12	34
Ulcers	32	44	50	33	43	202
Varicocele	...	...	3	...	...	3
Wrist, Diseased	...	...	1	...	1	2
Wounds	5	3	13	14	20	55
Various...	30	20	22	15	20	107
GRAND TOTAL	233	234	272	259	293	1291

§ Simple, 11; Compound, 2.
‖ Simple, 16; Compound, 2; Comminuted, 2.
¶ Simple, 1; Compound, 1.

ROPORTION ... ... 1 in 24⅓rd.

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Diseases of the Bladder	3
Erysipelas	3
Boiling Water, swallowed	1
Constipation, Ileus	1
Calculus; Operation	1
Ophthalmia; Intercurrent Laryngitis	1

TABLE II.—FRACTU

No. of Case.	Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Anterio Duratior
1	Ring, John ...	71	Single...	Wokingham ...	Labourer	Dec. 29, 1840	3 days .
2	Shackleford, T. .	13	.....	Reading... ...	Labourer	June 16, 1841	Immedia
3	Sawyer, John ...	2	.....	Reading... ...	.....	July 24, 1842	Immedia
4	Thomas, William	50	Single...	Reading... ...	Coachman... ...	July 8, 1840...	Immedia
5	Wernham, John	73	Married	Maple Durham	Farm-labourer...	Oct. 1, 1840...	Immedia
6	Warner, William	25	Single...	Reading... ...	Carter	Aug. 10, 1841	Immedia
7	Lovegrove, Lydia	45	Single...	Tilehurst ...	Needlewoman ...	April 5, 1842	15 week
8	Ruff, William ...	19	Single...	Sonning... ...	Railroad-labourer	Jan. 13, 1840	Immedia
9	Ilsley, Edward...	16	.....	Tilehurst ...	Railroad-labourer	May 14, 1840	Immedia
10	Green, John ...	11	.....	Maple Durham	.....	June 3, 1840	Immedia
11	Baker, George...	35	Married	Chatham ...	Railroad-labourer	Sept. 21, 1840	Immedia
12	Tull, Thomas ...	50	Married	Padworth ...	Labourer	Dec. 30, 1842	7 hours
13	Merrick, Daniel	18	Single...	Burghfield ...	Farm-labourer...	Oct. 19, 1843	Immedia
14	Simms, William	24	Single...	Aldworth ...	Farm-labourer...	June 21, 1840	4 month
15	Frond, Daniel ...	18	Single...	Tilehurst ...	Labourer	Dec. 15, 1842	Immedia
16	Harbor, Thomas	...	Married	Reading... ...	Painter	April 8, 1840	Immedia
17	Austin, Richard	43	.....	Reading... ...	Labourer	June 30, 1840	Immedi
18	Povey, Daniel ...	10	.....	Maple Durham	Farmer's boy ...	Nov. 9, 1840	Immedi
19	Cripps, Thomas	79	.....	Caversham ...	Thatcher	Mar. 25, 1842	Immedia
20	Sparkes, Thomas	16	.....	Reading... ...	Labourer	Sept. 9, 1842	Immedi
21	Leach, John ...	57	Married	Woodley ...	Labourer	Aug. 24, 1839	Immedi

* Amputation al

Total number of Simple Fractures	16	21
Ditto Compound	3	
Ditto Comminuted Simple	2	

Average number of Deaths ... ... 1 in 7 days

	Kind of Fracture.	Treatment.	Date of Discharge, or Death.	Result.			Duration of Treatment.
				Relieved.	Cured.	Died.	
.	Simple	Double inclined plane, &c.	Feb. 22, 1841	...	1	...	59 days
e	Ditto	Double inclined plane, splints, &c.	July 12, 1841	...	1	...	27 days
e	Ditto	Double inclined plane, splints, &c.	Aug. 30, 1842	...	1	...	37 days
e	Ditto	Liston's apparatus, &c. ...	Sept. 13, 1840	...	1	...	67 days
e	Comminuted ...	Liston's apparatus, &c. ...	Dec. 5, 1840 .	...	1	...	65 days
e	Ditto	Liston's apparatus, &c. ...	Oct. 15, 1841	...	1	...	66 days
.	Simple	None: discharged next day, being deemed incurable	April 6, 1842	1	...	...	1 day
e	Ditto	Double inclined plane, &c.	Feb. 7, 1840 .	...	1	...	25 days
e	Ditto	Double inclined plane, &c.	July 11, 1840	...	1	...	58 days
e	Ditto	Double inclined plane, &c.	Aug. 21, 1840	...	1	...	79 days
e	Ditto	Double inclined plane, &c.	Dec. 1, 1840 .	...	1	...	71 days
.	Ditto	Liston's apparatus, &c. ...	Mar. 27, 1843	...	1	...	87 days
e	Compound ...	Liston's apparatus, &c. ...	Jan. 1, 1844 .	...	1	...	73 days
.	Ditto	Liston's apparatus, &c. ...	June 28, 1840	1	...	...	6 days
e	Simple	Double inclined plane, splints, &c.	Feb. 14, 1843	...	1	...	61 days
e	Ditto	Double inclined plane, splints, &c.	July 14, 1840	...	1	...	97 days
e	Ditto	Double inclined plane, &c.	Sept. 22, 1840	...	1	...	84 days
e	Ditto	Liston's apparatus tried, but gave pain	Jan. 2, 1841 .	...	1	...	54 days
te	Simple of cervix	Straight splint, with extending screw	April 11, 1842	...	...	1	17 days
te	Compound, with complication	Straight splint, with extending screw	Sept. 10, 1842	...	...	1	1 day
te	Compound, right	.....	Aug. 26, 1839	...	...	1	2 days*

ove Knee.

Total number of Cases Relieved	2		
Ditto Cured	16	21	
Ditto Died	3		

Average Duration of Treatment of each Case ... ... 49 days.

TABLE III.—FRAC

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.
Egleton, Thomas...	29	Married ...	Reading	Brewer's labourer	August 22, 1840 ...
Willis, Thomas ...	19	Single ...	Reading	Traveller	July 26, 1841... ...
Lamsbury, Joseph	20	Single ...	Reading	Labourer	March 14, 1842 ...
Farsett, Samuel ...	23	Single ...	Reading	Brick-maker ...	May 16, 1842... ...
Witram, James ...	...	.....	.....	.....	November 20, 1839
Nebbs, Richard ...	24	Married ...	Crookham	Labourer	October 30, 1839 ...
Archer, William ...	8	.....	Reading	.....	May 30, 1842... ...
Castle, George ...	...	.....	Reading	Stone-mason ...	April 8, 1840... ...
Green, Thomas ...	...	.....	Bristol	Horse-keeper ...	November 28, 1840
Tilling, Nathan ...	43	.....	Sulhampstead ...	Carter...	March, 24, 1842 ...
Froud, Daniel ...	17	.....	Calcot	Carter...	August 21, 1842 ...
Harris, Henry ...	40	.....	Tilehurst	Farm-labourer ...	January 23, 1844 ...
Teal, George	38	Married ...	Reading	Horse-keeper ...	May 26, 1841 ...
Clarke, William ...	66	Married ...	Reading	Gardener	December 4,1841 ...
Rush, Richard ...	40	Married ...	Reading	Mason	October 15, 1842 ...
Johns, Thomas ...	45	Married ...	Chiswick, Middlesex	Waggoner	May 20, 1841... ...
Barry, Mary	32	Married ...	Reading	Domestic	October 7, 1842 ...
Brown, James ...	21	Single.....	Basildon	Miller	December 18, 1839
Briant, John	18	Single ...	Reading	Railroad-labourer	April 4, 1840... ...
Eldridge, Jeremiah	55	Married ...	Pangbourn	Labourer	April 6, 1840... ...
Winkworth, Moses	40	.....	Reading	Railroad-labourer	March 23, 1840 ...
Hutchins, James ...	30	.....	Tilehurst	Labourer	May 3, 1840 ... ...
Hearne, Thomas ...	22	.....	Pangbourn	Labourer	June 30, 1840 ...
Duffin, William ...	40	.....	Reading	Labourer	December 26, 1842
Cox, John	50	Married ...	Basildon	Carter...	October 3, 1840 ...
Johnson, George .	33	Single ...	Cholsey	Railroad-labourer	October 6, 1840 ...
Evans, William ...	47	Married ...	Reading	Groom...	December 5,1840 ...
Butchers, James ...	20	Single ...	Reading	.....	March 10, 1840 ...
Bailey, Thomas ...	18	Single ...	Calne	Labourer	May 18, 1840... ...
Simmonds, Stephen	11	.....	Caversham	.....	December 18, 1840
Palmer, Elijah ...	52	Married ...	Reading	Labourer	July 12, 1841... ...
Small, William ...	35	Married ...	Binfield	Farm-labourer ...	May 17, 1842... ...
Dasling, Richard ...	26	Single ...	Reading	Labourer	April 4, 1840... ...
Shervell, Richard...	33	Married ...	.....	Labourer	October 12, 1840 ...

* Ligamentous Union. † Complicated, with Injury of Abdomen. ‡ Amputati

Anterior Duration.	Part Fractured.	Date of Discharge, or Death.	Result.			Duration of Treatment.
			Relieved.	Cured.	Died.	
mmediate ...	Tibia	September 13, 1840	...	1	...	21 days
mmediate ...	Tibia, left	September 27, 1841	...	1	...	62 days
3 days ...	Tibia, left	May 3, 1842	...	1	...	50 days
mmediate ...	Tibia	June 18, 1842	...	1	...	33 days
mmediate ...	Ligamentous union of Tibia	March 6, 1840 ...	1	...	...	100 days*
mmediate ...	Tibia, Injury of Abdomen, &c.	November 5, 1839 ...	...	...	1	6 days†
mmediate ...	Tibia	July 11, 1842 ...	...	1	...	41 days
mmediate ...	Both Tibiæ	June 22, 1840 ...	...	1	...	75 days
mmediate ...	Tibia, right	January 26, 1841 ...	...	1	...	59 days
mmediate ...	Tibia	May 16, 1842 ...	...	1	...	54 days
mmediate ...	Tibia, compound...	November 15, 1842	...	1	...	25 days
mmediate ...	Tibia, right	April 23, 1844 ...	...	1	...	90 days
mmediate ...	Fibula	July 20, 1841 ...	...	1	...	54 days
mmediate ...	Fibula	February 22, 1842	...	1	...	79 days
mmediate ...	Fibula	November 14, 1842	...	1	...	29 days
mmediate ...	Fibula	June 29, 1841 ...	...	1	...	40 days
mmediate ...	Fibula	November 14, 1842	...	1	...	37 days
mmediate ...	Fibula	January 21, 1840 ...	...	1	...	32 days
mmediate ...	Fibula	April 28, 1840 ...	...	1	...	24 days
Immediate ...	Fibula	May 4, 1840	...	1	...	28 days
Immediate ...	Fibula	April 14, 1840 ...	...	1	...	22 days
Immediate ...	Fibula	June 13, 1840 ...	...	1	...	33 days
Immediate ...	Fibula	August 15, 1840 ...	...	1	...	47 days
Immediate ...	Fibula	January 10, 1843 ...	...	1	...	15 days
Immediate ...	Tibia and Fibula, compound	December 26, 1840	...	1	...	84 days‡
8 hours ...	Tibia and Fibula, comminuted	January 1, 1841 ...	...	1	...	85 days§
Immediate ...	Tibia and Fibula, compound	August 17, 1841 ...	...	1	...	247 days
Immediate ...	Tibia and Fibula	April 28, 1840 ...	...	1	...	48 days
Immediate ...	Tibia and Fibula	July 14, 1840 ...	...	1	...	56 days
Immediate ...	Tibia and Fibula	January 13, 1841 ...	...	1	...	26 days
Immediate ...	Tibia and Fibula	August 27, 1841 ...	...	1	...	45 days
Immediate ...	Tibia and Fibula	July 23, 1840 ...	...	1	...	66 days
Immediate ...	Tibia and Fibula	July 11, 1840 ...	...	1	...	98 days
Immediate ...	Tibia and Fibula, compound, comminuted	November 3, 1840...	...	1	...	22 days‖

n above Knee. § Amputation below Knee. ‖ Amputation below Knee.

TABLE III.—[CONTINUED.]—F

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.
Tubb, Jane	55	Married ...	Sonning	Housewife	June 11, 1841 ...
Hughes, John ...	62	Married ...	Reading	Scavenger	August 11, 1841 ...
Brown, Benjamin	33	Married ...	Earleigh	Carpenter	June 21, 1842 ...
Pavey, James ...	42	Married ...	Earleigh	Navigator	September 2, 1839
Edgeton, Francis...	16	Single ...	Reading	Labourer	May 30, 1840 ...
Parker, William ...	34	Single ...	Reading	Carpenter	June 22, 1842 ...
Attwells, James ...	40	Married ...	Reading	Brewer's labourer	December 9, 1842...
Withers, John ...	30	Married ...	Reading	Carter...	August 29, 1842 ...
Miles, Daniell ...	23	Single ...	Burghfield	Labourer	November 7, 1839
Preston, John ...	75	.....	Earleigh...	Labourer	November 11, 1839
Heath, James ...	13	.....	Reading	Railroad-boy ...	June 25, 1839 ...
Hutchins, John ...	45	.....	Reading	Blacksmith... ...	February 4, 1840 ...
Allen, William ...	17	Single ...	Pangbourn	Labourer	July 4, 1840... ...
Soden, Thomas ...	...	.....	Swallowfield	Labourer	July 21, 1840 ...
Morman, George...	30	.....	Swallowfield	Labourer	December 18, 1840
Hazill, Thomas ...	47	.....	Reading	Porter...	April 5, 1841 ...
Read, Elizabeth ...	28	.....	Bristol	.....	June 27, 1841 ...
Andrews, George...	14	.....	Long Barn	.....	October 26, 1841 ...
Taylor, Samuel ...	39	.....	Caversham	Bargeman	March 17, 1843 ...
Edwards, William	36	.....	Crowmarsh	Labourer	November 22, 1843
Stacey, Thomas ...	51	.....	Reading	Whitesmith ...	January 6, 1844 ...
Barney, William ...	34	Married ...	Reading	Millwright... ...	April 25, 1842 ...
Salmon, Frederick	22	Single ...	Reading	Whitesmith ...	October 27, 1843...
Ellis, Barah... ...	...	.....	Reading	Carman	August 31, 1843 ...
Jones, William ...	15	.....	.....	Railroad-labourer	September 5, 1839
Rayner, Henry ...	35	.....	Twyford...	.....	April 25, 1840 ...
Pearson, Stephen...	54	Married ...	Reading	Scavenger	February 4, 1841...

* Amputation above Knee.
† Amputation above Knee.
‡ Amputation abo
§ Amputation bel

Total number of Fractured Tibia only	12	61
Ditto Fibula only	12	
Ditto Tibia and Fibula	34	
Ditto Great Toe	3	

Total number of Cases Relieved	1	61
Ditto Cured	51	
Ditto Died	9	

Amputation performed in 9 Cases.

RACTURED LEGS.

Anterior Duration.	Part Fractured.	Date of Discharge, or Death.	Result.			Duration of Treatment.
			Relieved.	Cured.	Died.	
Immediate ...	Tibia and Fibula	September 6, 1841	...	1	...	87 days
Immediate ...	Tibia and Fibula	October 12, 1841 ...	...	1	...	61 days
Immediate ...	Tibia and Fibula	July 27, 1842 ...	...	1	...	36 days
mmediate ...	Tibia and Fibula	September 28, 1839	...	1	...	26 days
immediate ...	Tibia and Fibula	July 28, 1840 ...	...	1	...	59 days
mmediate ...	Tibia and Fibula, compound	July 12, 1842 ...	...	...	1	20 days*
mmediate ...	Tibia and Fibula	January 22, 1843...	...	1	...	43 days
7 hours ...	Tibia and Fibula, compound	September 13, 1842	...	...	1	15 days†
mmediate ...	Tibia and Fibula, compound	November 24, 1839	...	...	1	17 days
mmediate ...	Tibia and Fibula, compound	November 16, 1839	...	...	1	4 days
mmediate ...	Tibia and Fibula, compound	November 19, 1839	...	1	...	147 days‡
mmediate ...	Tibia and Fibula	April 21, 1840 ...	...	1	...	45 days
mmediate ...	Tibia and Fibula	August 18, 1840 ...	...	1	...	45 days
mmediate ...	Tibia and Fibula, comminuted	October 6, 1840 ...	...	1	...	47 days
mmediate ...	Tibia and Fibula, comminuted	February 9, 1841...	...	1	...	53 days
mmediate ...	Tibia and Fibula	May 4, 1841... ...	...	1	...	29 days
mmediate ...	Tibia and Fibula, compound	October 20, 1841...	...	1	...	115 days§
mmediate ...	Tibia and Fibula	December 14, 1841	...	1	...	49 days
mmediate ...	Tibia and Fibula, compound	March 17, 1843 ...	...	...	1	1 day
mmediate ...	Tibia and Fibula	December 28, 1843	...	1	...	56 days
mmediate ...	Tibia and Fibula	April 1, 1844... ...	...	1	...	54 days
mmediate ...	Great Toe	June 27, 1842 ...	...	1	...	52 days
day	Great Toe	December 12, 1843	...	1	...	46 days
mmediate ...	Great Toe	September 5, 1843	...	1	...	6 days
mmediate ...	Laceration of Right Knee and Foot, fracture	October 15, 1839...	...	...	1	40 days‖
.....	Compound fracture, Leg ...	April 26, 1840 ...	...	...	1	1 day
mmediate ...	Compound fracture, Leg ...	February 16, 1841	...	...	1	12 days¶

ve Knee.
w Knee.

‖ Amputation, Thigh.
¶ Amputation, Thigh.

Total number of Simple Fractures	... ...	45	61
Ditto Compound ditto	... ...	11	
Ditto Comminuted ditto	... ...	5	

Average Duration of each Case	Simple and Compound ...	48 days.
	Simple	45¾ days.
	Compound	47 days.

Average number of Deaths ... ... 1 in 7.

Table IV.—FRACTU

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Anterior Duration.
Metcalf, Jabez ...	12	.....	Burghfield ...	Carter	Dec. 29, 1840...	5 days ..
Somerset, Alfred .	6	.....	Reading... ...	.....	April 17, 1841 .	Immediate..
Gislingbury, H. ..	43	Single	Reading... ...	Labourer	January 7, 1840	Immediate..
May, John... ...	9	.....	Earleigh	.....	October 1, 1840	Immediate..
Parsons, Thomas .	15	Single ...	Reading... ...	Coal-seller... ...	July 22, 1841...	Immediate..
Sadler, Thomas...	50	Married...	Sonning... ...	Farm-labourer ...	Oct. 13, 1841...	Immediate..
Bolton, John ...	30	Single ...	Maidenhead ...	Railroad-labourer	January 7, 1842	Immediate..
Collins, Adam ...	52	Single ...	Pangbourn ...	Sawyer	Jan. 10, 1842...	1 day... ..
O'Connell, Wm. .	10	.....	Reading... ...	.....	Dec. 28, 1840...	Immediate..
Jones, Joseph ...	31	.....	Reading... ...	Railroad-labourer	June 19, 1839...	Immediate..
Weller, Robert ...	19	Single ...	Pangbourn ...	Labourer	Nov. 12, 1839...	Immediate.
Bosier, Shadrach .	14	.....	Strathfieldsaye .	Carter	August 17, 1841	Immediate..
Collins, Adam ...	23	Single ...	Pangbourn ...	Sawyer	Nov. 1, 1841 ...	Immediate..

* Amputation.

Total number of Simple Fractures 11
Ditto Compound ditto 2

Total number in which Amputat
Total number of Cures ... ...

Table V.—FRACTURI

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.
Brant, William ...	23	Single	Reading	Bargeman	September 9, 1841
Litlen, Robert ...	35	Married ...	Reading	Sawyer	June 13, 1841 ...
Turner, Richard ...	7	.....	Tilehurst	....	November 8, 1841
Swain, Elizabeth ...	60	.....	Winchester	.....	March 26, 1842 ...
Petty, Warbrown...	14	.....	Whitley	.....	August 13, 1843 ...
Allan, Ann	54	Married ...	Reading	Housewife	September 21, 1843
Turner, Richard ...	7	.....	Reading	.....	January 6, 1841 ...
Wheeler, Ann ...	31	Married ...	Knightsbridge ...	Housewife	December 24, 1841
Hewer, Joseph ...	35	Single	Wallingford ...	Labourer	January 15, 1842 .
Saunders, Thomas .	13	.....	Hurst	Railroad-labourer	June 17, 1839 ...
Watmore, William .	13	.....	Caversham	Factory-boy ...	March 11, 1843 ...
Holloway, Richard .	19	Single	Dunsdon Green .	Blacksmith	October 3, 1843 ...
Wheatley, Henry...	10½	.....	Reading	.....	August 3, 1842 ...
Fry, George	6	.....	Reading	.....	July 18, 1840 ...
Jarvis, David	27	Single	Reading	Navigator	August 28, 1839 ...
Burgess, William ...	22	Single	Reading	Bargeman	December 4, 1839
Willis, William ...	13	.....	Reading	Railroad-boy ...	February 25, 1840
Chandler, William .	20	Single	Shinfield	Farm-labourer .	September 2, 1843

* Amputation.

Total number of Radius only (simple) 7
Ditto Radius and Ulna (simple, 9; compound, 2;) 11
} 18; all of which were cured.

To
A

RED HUMERI.

Part Fractured.	Cause.	Date of Discharge.	Result.		Duration of Treatment.
			Cured.	Died.	
Neck	Run over by Cart ...	Jan. 26, 1841...	1	...	28 days
Shaft	Fall	April 29, 1841	1	...	12 days
Shaft	Fall	Feb. 1, 1840 ...	1	...	25 days
Condyle, left	Fall	Oct. 10, 1840...	1	...	9 days
Shaft	Fall	July 31, 1841 ...	1	...	9 days
Shaft	Fall	Nov. 27, 1841...	1	...	45 days
Compound, extending into Elbow-Joint	Run over by Truck .	March 11, 1842	1	...	63 days*
Shaft	Fall	Feb. 28, 1842...	1	...	49 days
Inner Condyle	Fall	January 1, 1841	1	...	4 days
Inner Condyle, extending into Elbow-Joint	Fall	July 30, 1839...	1	...	41 days
Outer Condyle, extending into Elbow-Joint	Not known	Dec. 17, 1839...	1	...	35 days
Shaft, compound	Not known	Nov. 7, 1841 ...	1	...	31 days†
Shaft	Not known	Dec. 21, 1841...	1	...	50 days

† Amputation.

n was performed	2	Total number of Deaths	0
... ...	13	Average duration of each Case	30½ days.

D FORE-ARMS.

Anterior Duration.	Part Fractured.	Date of Discharge.	Result.		Duration of Treatment.
			Cured.	Died.	
Immediate ...	Radius	September 21, 1841	1	...	12 days
10 hours	Radius	July 13, 1841 ...	1	...	30 days
Immediate ...	Radius	November 29, 1841	1	...	21 days
Immediate ...	Radius	April 15, 1842 ...	1	...	20 days
Immediate ...	Radius	August 14, 1843 ...	1	...	1 day
Immediate ...	Radius	October 24, 1843...	1	...	33 days
Immediate ...	Radius	January 31, 1841...	1	...	25 days
Immediate ...	Radius and Ulna	January 4, 1842 ...	1	...	11 days
Immediate ...	Radius and Ulna, compound ...	March 11, 1842 ...	1	...	55 days*
Same day ...	Radius and Ulna, at Wrist Joint	July 23, 1839 ...	1	...	36 days
Immediate ...	Radius and Ulna	April 28, 1843 ...	1	...	38 days
2 weeks	Radius and Ulna	October 31, 1843...	1	...	28 days
Immediate ...	Radius and Ulna	August 23, 1842 ...	1	...	20 days
Immediate ...	Radius and Ulna	August 18, 1840 ...	1	...	31 days
Immediate ...	Radius and Ulna, compound, at Elbow Joint	October 1, 1839 ...	1	...	34 days†
Immediate ...	Radius and Ulna	December 31, 1839	1	...	27 days
Immediate ...	Radius and Ulna	March 17, 1840 ...	1	...	20 days
Immediate ...	Radius and Ulna	September 30, 1843	1	...	28 days

† Amputation.

tal number in which Amputation was performed 2
erage duration of Treatment of each Case ... ... 26, 1-9th days.

Table VI.—FRACTURES

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Anterior Duration.	
Burrell, Salmon*	30	Married	Lynn, Norfolk	Tailor	June 22, 1840	A few hours	2n
Nation, Joel† ...	45	Married	Burghfield ...	Farm-labourer...	Feb. 11, 1840	10 days ...	6t
Saunders, Wm....	22	Single .	Ringshell ...	Railroad-labourer	June 15, 1841	1 month ...	Lu
Clarke, Caleb ...	36	Married	Reading	Labourer	Nov. 15, 1841, at 6 p.m.	Immediate	6t
Berratt, Jonathan	37	.....	Newbury ...	Gardner	Dec. 7, 1843...	Immediate	Lu

* Post-Mortem Appearances, &c.—*Body:* Sloughing ulcer on sacrum; extending.—*Heart:* Right side filled with fibrine, and probably the immediate cause of death.—*Kidneys:* Congested and firm; infundibula and pelvis of each thickened, with small patches of phosphate of lime adherent, and filled with muco-puriform fluid, strongly urinous and ammoniacal.—*Bladder:* Congested and dark; an ulcer anteriorly above the urethral opening, with sloughing margin, having perforated the mucous and muscular coats.—*Spine:* Fracture of the second dorsal vertebra, the superior portion of the column being displaced forwards; the posterior edge of the body of the second resting on the body of the third about one-sixth of its diameter: a portion of bone driven forwards into the canal, dividing the cord into two portions opposite the third; the cord of normal colour and firmness, above and below the division, no attempt having been made at reparation.

† eigh and com was the sive rest vert of c

Average duration of each Case ... ...

Table VII.—FRACTURES

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	
Pyke, Elizabeth ...	5	.....	Reading	.....	July 31, 1841 ...	I
Moss, George ...	12	.....	Reading	.....	October 25, 1841	I
Collier, Edward ...	5	.....	Reading	.....	July 9, 1841	I
Wooley, Richard...	32	Married .	Cheltenham ...	Stone-mason ...	December 24, 1841	I
George, Henry ...	12	.....	Reading	.....	December 15, 1842	I
Rumsey, Benjamin	19	Single ...	Sonning	Railroad-labourer	March 4, 1840 ...	I
Styles, George ...	16	.....	Reading	Horse-keeper ...	December 24, 1839	I
Smee, Samuel ...	52	.....	Reading	Seaman	June 1, 1841	I
Englefield, John ...	12	.....	Shinfield	Farmer's boy ...	October 18, 1842	I
Spiers, James ...	16	.....	.....	Carter	December 24, 1839	I
Williams, John ...	36	Married .	.....	Horse-dealer ...	September 21, 1842	I
Bartlett, George ...	20	Single ...	Woodley	Groom	July 25, 1843 ...	I

* Trephined. † Trephine

Total number of Simple Fractures	4	12	
Ditto Compound	7		
Ditto Concussion	1		

OF THE SPINE.

Part Fractured.	Cause.	Date of Death or Discharge.	Result.			Duration of Treatment.
			Relieved.	Cured.	Died.	
Dorsal Vertebra	Fell down	Aug. 2, 1840	...	...	1	41 days
and 7th Dorsal Vertebræ	Fell from a height of 8 feet	May 9, 1840	...	...	1	78 days
mbar Vertebræ, with Concussion of Spine	Pole fell on him ...	Sept. 4, 1841	...	...	1	81 days
Cervical Vertebra	Fall	Nov. 18, 1841, at 3 p.m.	...	...	1	69 hours
mbar Vertebræ	.....	Jan. 1, 1844...	...	...	1	25 days

Post-Mortem Appearances, &c.—Inspection fifty hours after death: the fifth, sixth, seventh, h, and ninth dorsal vertebræ having been removed, a separation was observed between the sixth seventh, the superior portion of the spinal column being displaced forwards, and the cord ressed between the arch of the sixth and body of the seventh. The cord above the fracture irm, but much congested; that below was in a semi-fluid state, with some purulent fluid between hembranes and the bone. The fractured parts were indistinct; but after maceration, an extenracture was seen between the sixth and seventh, the posterior edge of the body of the sixth g on the centre of the body of the seventh. The transverse processes of the fifth and sixth bræ on the right side were fractured, the corresponding ribs remaining entire. A large quantity llus had united the different points of fracture.

... ... 43½ days.

OF THE CRANIUM.

Anterior Duration.	Part Fractured.	Date of Discharge.	Result.		Duration of Treatment.
			Cured.	Died.	
mediate ...	Skull, compound...	October 21, 1841	1	...	82 days
mediate ...	Skull, compound...	December 13, 4841	1	...	49 days
mediate ...	Skull, compound...	November 23, 1841	1	...	106 days*
mediate ...	Skull, compound...	December 29, 1841	...	1	5 days†
mediate ...	Skull, compound, with Depression	December 15, 1842	...	1	5 hours
mediate ...	Temporal Bone, with Depression	March 24, 1840 ...	1	...	20 days
mediate ...	Os Frontis, with Depression ...	December 30, 1839	...	1	6 days
mediate ...	Os Frontis	July 5, 1841 ...	1	...	34 days
mediate ...	Skull, compound, with Depression	October 19, 1842	...	1	1 day
mediate ...	Frontal Bone, compound	December 30, 1839	...	1	6 days‡
mediate ...	Base, with Concussion	September 22, 1842	...	1	1 day
mediate ...	Fractured Base, with Laceration of Brain	July 27, 1843 ...	...	1	2 days

l. ‡ Trephined.

Total number of Cures 5
Ditto Deaths 7
Average duration of Treatment of each Case ... ... 27½ days.

Table VIII.—FRACTU

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Ant Dura
Paynter James ...	24	Married	Drayton	Railroad-labourer	Nov. 14, 1840	Immed
Perkins, Martha ...	75	Married	Pangbourn ...	.....	Aug. 7, 1840	4 days
Parsons, James ...	23	Married	Reading	Labourer	July 7, 1843	Immed
Average Duration of Treatment of each Case						

Table IX.—DISL

Name.	Age.	State.	Residence.	Occupation.	Date of
Miller, Charles	23	Single ...	Hungerford	Labourer	August 2
Langley, Alfred	32	Married ...	Burghfield	Farm-labourer ...	Novemb
Farley, Samuel	32	Married ...	Paddington	Guard on Railway .	May 18,
Nash, James	49	Married ...	Hurst	Labourer	March 1
Wigmore, John	53	Married ...	Bucklebury	Labourer	April 6,
Green, Joseph...	35	Married ...	Cookham	Labourer	Novemb
Stapleton, James	35	Married ...	Cheltenham	Labourer	Decemb
Whitington, Richard ...	55	Single ...	Reading	Labourer	October
Turner, Mary	10	.....	Peppard	.....	June 9,
Dodd Frederick	9	.....	Pangbourn	.....	Septemb
Hawkins, Thomas	24	Married ...	Bristol	Stone-mason	Decem
Cooper, Hannah	40	Married ...	Kennington	Housewife	Decemb
Total number of Dislocations of Femur 2					
Ditto Ditto of Humerus 6					
Average Duration of Treatment of each Case					

RED SCAPULÆ.

ior on.	Part Fractured.	Cause.	Date of Discharge.	Result. Cured.	Result. Died.	Duration of Treatment.
ate ...	Scapula	Knocked down by engine	Dec. 15, 1840	1	...	31 days
...	Scapula	Fell down	Aug. 18, 1840	1	...	11 days
te ...	Scapula	Scaffold-pole fell on him	Aug. 3, 1843	1	...	27 days
...	... ...	... ...	23 days.			

CATIONS.

Admission.	Part Dislocated.	Date of Discharge.	Result. Cured.	Result. Died.	Duration of Treatment.
l, 1839 ...	Femur, on Dorsum Ilii	September 23, 1839	1	...	33 days
r 27, 1840	Femur, on Dorsum Ilii	February 9, 1841 ...	1	...	73 days
841	Humerus	June 1, 1841	1	...	14 days
1842 ...	Humerus	March 20, 1842 ...	1	...	6 days
842	Humerus	April 11, 1842 ...	1	...	5 days
14, 1843	Humerus	December 12, 1843	1	...	28 days
24, 1840	Humerus	December 25, 1840	1	...	2 days
1, 1840 ...	Humerus	November 13, 1840	1	...	23 days
40	Radius	June 27, 1840	1	...	18 days
15, 1843	Radius	September 25, 1843	1	...	10 days
24, 1842 ...	Great Toe	February 1, 1843 ...	1	...	38 days
24, 1842	Great Toe	March 8, 1843 ...	1	...	73 days
Total number of Dislocations of Radius				2	
Ditto Ditto of Great Toe				2	
... ...	... ...	27 days.			

Table X.—OPE

NATURE OF CASE.	1st Year. 1839–40.	2nd Year. 1840–41.	3rd Year. 1841–42.	4th Year. 1842–43.	5th Year. 1843–44.	Total.
Amputation: Finger	...	1	1	4	2	8
Amputation: Arm	1	2	3	1	1	8
Amputation: Shoulder-Joint	1	...	...	1	1	3
Amputation: Thigh	1	4	1	4	2	12
Amputation: Leg	...	2	1	...	1	4
Amputation: Toe	...	...	1	1	...	2
Fibrous Tumour	1	...	...	...	...	1
Cataract	2	2	...	1	1	6
Division of Tendons	1	3	4	1	2	11
Artificial Pupil	1	...	...	...	1	2
Staphyloma	2	...	...	...	...	2
Carried forward	10	14	11	13	11	59

Total number of Deaths ... ...

BEING F

Lithotomy	1
Hernia	2
Yearly Average of Operations	19

Table XI.—ANAL

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.
Biggs, Charles	23	Single	Hurst	Chimney-sweep	November 15, 1842
Eli, William	35	Married	Sulhampstead	Groom	December 24, 1839
Trendell, George	37	Single	Bray	Labourer	July 5, 1842
Ramans, Elijah	64	Married	Badbury	Labourer	March 28, 1843

Total number of Cases 4

The division of the sphincter on the groove of a probe-director, as advised by Sir Benjamin Brodie, is t
passing the finger between them once or twice daily for three

ATIONS.

NATURE OF CASE.	1st Year. 1839–40.	2nd Year. 1840–41.	3rd Year. 1841–42.	4th Year. 1842–43.	5th Year. 1843–44.	TOTAL.
Brought forward	10	14	11	13	11	59
trangulated Hernia	...	1	...	3	3	7
ithotomy	...	1	...	1	1	3
are-Lip	...	2	1	1	1	5
emoval of Nævus	...	1	...	...	1	2
emoval of Tumours	...	3	6	...	...	9
rephined	...	...	2	...	...	2
bliteration of Veins	...	...	2	1	...	3
ydrocele	...	...	1	...	...	1
igature of Radial Artery	...	...	...	...	1	1
istula	...	...	...	...	4	4
GRAND TOTAL	10	22	23	19	22	96

... ... 9

Amputation 5
Trephined 1

Average Deaths in all Operations ... ... 1 in $10\frac{1}{2}$

ISTULÆ.

Anterior Duration.	Nature of Disease.	Date of Operation.	Result. Cured.	Duration of Treatment.
veeks	Simple	November 24, 1842	1	55 days
nonths ...	Abscess near Rectum; became Fistulous	January 17, 1840 .	1	59 days
nonths ...	Simple	July 15, 1842 ...	1	27 days
nonths ...	Simple	March 30, 1843 ...	1	38 days

Average Duration of Treatment of each Case ... ... 45 days.

ost simple mode of treating Anal Fistulæ. If adhesion of the cut surfaces be prevented by ur days, little further treatment will be required.

Table XII.—C

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	
Street, Francis ...	55	Married...	Little Wick Green	Ostler	November 17, 1840	1
Evans, Henry ...	60	Married...	Maple Durham ...	Farm-labourer	November, 1839 ...	N
Wakelin, Richard*	67	Married...	Reading	Carpenter ...	August 31, 1841 ...	1
Tubb, Samuel ...	60	Married...	Hungerford	Carpenter ...	May 21, 1842 ...	N
Buxey, George ...	13	.....	Bucklesbury	Farmer's boy .	January 21, 1840...	1
Golding, Sarah ...	68	Married...	Lawrance Waltham	Housewife ...	November 10, 1840	1

* Extraction failed; but vision was afterwards recovered

Lenticular	5 } 6	Successful	
Capsular	1	Failed	

Extraction was preferred in all; and only one eye was operated on in each case. One failed in the firs was congenital, and had been operated on during infancy, but was not completed: the capsule b

Table XIII.—S T

Name.	Age.	Residence.	Date of Admission.	Anterior Duration.	Description.
Chard, Henry* ...	11	Reading ...	March 24, 1840 ...	7 years ...	Partial, conical, lower l eye, superior margin not adherent; no vis
Mascall, Michael...	11	Reading ...	December 31, 1839	2 years ...	Spherical, right eye...

* The eye was in a favourable state for the operation of artificial pupi

Total number of Cases 2

ARTIFICI

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Descri
Mascall, Michael*	11	.....	Reading...	.....	January 30, 1840	Dense central leucon herent to cornea; of cornea at the inn parent; can percei
Wakelin, Richard†	67	Married	Reading...	Carpenter	Operated on out of Hospital, by request	Pupil closed and d adherent to cornea

* No benefit was expected, but the operation was performed at the earnest desire of the patient and frien

Successful ... ... 1 || Failed ... ... 1 || Total number of C

TARACT.

Anterior uration.	Description.	Single.	Date of Operation.	Result. Cured.	Result. Failed.	Duration of Treatment.
r... ...	Hard, double	Operation on one eye	November 28, 1840	...	1	38 days
known...	Ditto	Ditto	November 11, 1839	...	1	50 days
ir... ...	Ditto	Ditto	September 3, 1841	1	...	37 days
known...	Ditto	Ditto	June 5, 1842... ...	1	...	41 days
ears ...	Capsular ...	Ditto	January 27, 1840...	1	...	82 days
onths ...	Hard, double	Ditto	November 20, 1840	1	...	49 days

artificial pupil. (See Artificial Pupil, below.)

... ... 4 } 6
p... ... 2 }

Total number of Cases 6
Average duration of Treatment of each Case ... 49 days.

stance, but vision was recovered afterwards by artificial pupil. The case of capsular cataract too tough to yield to the needle, was extracted through a small opening in the cornea.

PHYLOMA.

	Treatment.	Date of Operation.	Cause.	Result. Cured.	Duration of Treatment.
, right pupil	Excision	March 27, 1840 ...	Not known .	1	27 days
. ...	Excision of two-thirds of cornea	January 1, 1840 ...	Variola ...	1	29 days

ut vision of the other eye being good, it was not recommended.

Average duration of Treatment of each Case ... ... 28 days.

L PUPIL.

on.	Treatment.	Date of Operation.	Cause.	Result. Cured.	Result. Failed.	Duration of Treatment.
iris generally ad- a narrow portion ide remains trans- ght only: left eye n upwards, and atrix: right eye	Incision through the cornea	Jan. 30, 1840	.....	...	1	26 days
	Incision through the cornea	Aug. 27, 1843	Operation for Cataract	1	...	30 days

† The fibres of the iris being tense, a simple division formed a good pupil; vision restored.

s ... ... 2 ‖ Average duration of Treatment of each Case ... 28 days.

Table XIV.—OBLITERA

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Anterior Duration.
Bowling, Edw.	23	Married	Lawrence Waltham	Labourer .	Sept. 13, 1842	1 month: had previous attack
Answorth, John	29	Married	Reading	Sawyer ...	June 8, 1842	Ever since he can recollect
Woolford, Wm.	42	Married	.....	Carter ...	April 13, 1841	Not stated ... ...

Two of the patients remain well, without a return of ulcer, and with varicosity considerably diminished. examination was obtained; cause of death not known. The surface of the vein was in each case inflammation was circumscribed, and no untoward symptoms occurred.

Table XV.—H A

Name.	Age.	Residence.	Occupation.	Date of Admiss
Willis, Anna	4½	Reading	.....	October 25, 1842
Brown, David	12	Sonning	Farmer's boy	July 7, 1340 ...
Benham, Thomas	14	Twyford	Labourer	September 29, 18
Pritchard, Joseph	25	Woodley	Labourer	January 12, 184
Day, Joel	8	Burghfield	.....	May 4, 1841 ...

The ligature was used in all. In the case of Thomas Benham, an artificial palate, with portion of ja and the result was most successful, in improving the articulation and de

Palate, Cleft ... ... 2 || Palate, Entire ... ... 3 || Total number of Case

Table XVI.—T R I

Name.	Age.	State.	Residence.	Occupation.	Date of Adr
Wooley, Richard ...	32	Married ...	Cheltenham	Stone-mason	December 2
Collier, Edward ...	5	.....	Reading	.....	July 9, 184
Spiers, James	16	.....	.....	Carter	December 3

Cured ... ... 1 || Died ... ... 2 || Total number of Cases

TION OF VEINS.

Nature of Disease.	Treatment.	Date of Operation.	Result. Cured.	Duration of Treatment.
arge Ulcer of right leg, with Varicosity of internal saphena	Vienna Paste applied for 12 hours on two spots	Sept. 19, 1842	1	55 days
aricose Veins of left leg, with Ulcer...	Vienna Paste applied for 8 hours on three spots	June 11, 1842	1	51 days
aricose Veins, with Ulcer ...	Vienna Paste applied on two spots	April 20, 1841	1	84 days

he other died suddenly, a few months after his dismissal from the hospital; no *post-mortem* ed over the space of half an inch, and the Vienna Paste kept in contact. The subsequent

E-LIP.

	Description.	Date of Operation.	Result. Cured.	Duration of Treatment.
..	Single, with Cleft Palate	November 23, 1842 .	1	55 days
..	Single	July 11, 1840	1	20 days
..	Single, with Cleft Palate	October 13, 1840 ...	1	34 days
..	Single	January 25, 1841 ...	1	32 days
..	Single	May 13, 1841	1	41 days

d teeth, was cleverly constructed by Mr. Bewley, Dentist, Reading, before the operation; ition, as well as the removal of a very unsightly deformity.

... ... 5 || Average duration of Treatment of each Case ... 36 days.

HINED.

ion.	Nature of Accident.	Date of Operation.	Result. Cured.	Result. Died.	Duration of Treatment.
841	Accident on railway: compound fracture of skull, with laceration of brain	December 25, 1841	...	1	5 days
...	Cart fell on him: compound, comminuted fracture of skull	On admission ...	1	...	136 days
339	Compound fracture of frontal bone ...	Same day	...	1	6 days

... 3 || Average duration of Treatment of each Case ... 49 days.

Table XVII.—TU

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.	Anterior Duration.
Arlett, Sarah ...	17	Single .	Shinfield ...	Farmer's girl...	Oct. 20, 1840	14 years . ...
Dormer, Wm.* ...	21	Single .	Caversham .	Bricklayer.....	Sept. 21, 1841	1 month . ...
Pitts, Sarah	30	Married	Reading ...	Housewife.....	Sept. 29, 1840	6 months . ...
Seymour, Richard .	70	Married	.....	Labourer	Oct. 12, 1841	7 months . ...
Trendell, Charles .	10	Single .	Heckfield...	.....	June 29, 1841	1 year ... ...
Hayward, Amelia .	10	.....	Reading ...	.....	Nov. 10, 1840	Soon after birth
Turner, George ...	50	Married	Sonning ...	Chimney-sweep	Oct. 4, 1842 .	9 years ... ...
Taylor, Thomas ...	15	.....	.....	.....	July 5, 1842 .	6 weeks... ...
Willis, Isaac... ...	35	.....	Ruscombe .	Labourer	Dec. 27, 1842	5 years ... ...
Osborne, Mary Ann†	7 mths.	.....	Reading ...	.....	April 18, 1843	6 months . ...
May, Thomas ...	7 mths.	.....	Sonning ...	.....	Feb. 2, 1841	Congenital ...

* This patient was temporarily cured, but died May 18th, 1842, at his own residence, with a very large enceph

† Her mother states that the nævus was not observed until a month after birth. Vaccine lymph introduce

Nævus or Erectile	2
Cellular (simple)	1
Carcinoma, encephaloid	1
Adipose	1
Total number of Cases	11

Table XVIII.—CALCULUS IN BI

Name.	Age.	Residence.	Date of Admission.	Anterior Duration.	Date of Ope
Hambleton, Stephen .	9	Earleigh Common .	June 21, 1842 ...	Not known ...	July 1, 1842
Higgs, Thomas	5	Reading	June 13, 1843 ...	2 years	July 1, 1843
Malder, William ...	3	Reading	January 12, 1843...	Not known ...	January 30,

Cured	2
Died	1

Description.	Date of Operation.	Operation.	Result. Cured.	Result. Died.	Duration of Treatment.
se of fore-arm	Oct. 22, 1840	Excision	1	...	38 days
haloid Carcinoma of con-tiva; right eye	Sept. 24, 1841	Division of palpe-bra, and excision	...	1	42 days
is of mamma	Oct. 16, 1840	Excision	1	...	45 days
ar, size of walnut, on inner of right eye	Oct. 14, 1841	Excision	1	...	31 days
lbuminous of lower lip ...	July 1, 1841 .	Incision; caustic .	1	...	4 days
ystic	Nov. 17, 1840	Punctured: 10 oz. of fluid drawn; after which seton	1	...	56 days
ed, size of walnut, in the h	Oct. 6, 1842 .	Ligature; incision	1	...	10 days
of gum	July 5, 1842 .	Ligature; nitrate of silver	1	...	34 days
lar in front of ear ...	Jan. 5, 1843 .	Excision	1	...	21 days
, sub-cutaneous of face	April & May, 1843	Vaccination; seton	1	...	31 days
, sub-cutaneous of lower	Feb. & March, 1841	Vaccination, inci-sion, and ligature	1	...	42 days

mour of the orbital appendages, a cast of which is preserved in the Hospital Museum.
veral spots; afterwards a seton thread, which gave relief.

s of mamma	1
lar	1
ed	3
pulis	1

duration of Treatment of each Case ... 32 days.

DER. (LITHOTOMY.)

	Weight of Calculus.	Composition of Calculus.	Result. Cured.	Result. Died.	Duration of Treatment.
	7 scruples, 4 grains	Lithic	...	1	26 days
	23 grains	Lithate of Ammonia, with crust of triple Phosphate	1	...	63 days
	56 grains	Lithic	1	...	39 days

mber of Cases 3
duration of Treatment of each Case ... ... 43 days.

TABLE XIX.—RESULTS

Name.	Age.	State.	Occupation.	Nature of Injury.	Nature of Disease.	C
Jarvis, David .	27	Single .	Navigator	Compound fracture of Elbow, left	.....	R
Bolton, John .	30	Single .	Railroad-labourer	Fracture of Humerus, in two places	.....	R
Cox, John ...	50	Married	Carter	Compound fracture of Leg, above ankle	.....	R
Johnson, Geo. .	33	Single .	Railroad-labourer	Compound fracture of Leg, right	.....	R
Leach, John ...	57	Married	Labourer	Compound fracture of Femur, right	.....	R
Morris, John .	21	Single .	Railroad-labourer	Laceration of Hand and Wrist ...	.....	E
Blake, George .	30	Single .	Farm-labourer ...	.....	Disabled Knee; absorption of Cartilage	S
Cox, Ann ...	23	Single .	Servant	Severe burn, 4th degree	.....	
Edmonds, D. .	6	.....	.....	.....	Diseased Knee, right, of 2 years' standing	
Fruen, John ...	11	.....	.....	.....	Diseased Knee, right...	
Hacket, Anthy.	21	Single .	Conductor on railway	Wound through Shoulder-Joint .	.....	G
Parker, William	34	Single .	Carpenter	Compound fracture of Tibia and Fibula	.....	F
Withers, John .	30	Married	Carter	Compound fracture of Tibia and Fibula	.....	
Shepherd, Mary	19	Single .	Servant	.....	Onychia of great Toe; diseased bone	
Jones, William	15	Single .	Railroad-labourer	Laceration of right Knee and Foot	.....	R
Sherwell, Rich.	33	Married	Labourer	Compound fracture of Tibia and Fibula	.....	W
Gutteridge, W.	55	Married	Publican	.....	Necrosis; Tibia	
Ham, Frederick	17	Single .	Clerk	Laceration of Hand	.....	E
Hatt, Caroline .	21	Single .	Field-labourer ...	Severe Burn	.....	
Wheeler, Wm. .	30	Married	Tailor...	Laceration of Hand	.....	
Hewer, Joseph	35	Single .	Labourer	Compound fracture of Radius and Ulna	.....	
Cooper, James .	30	Single .	Carpenter	Laceration of Hand	.....	B
Heath, James .	13	Single .	Railroad-labourer	Compound fracture of Tibia and Fibula	.....	
Coxhead, James	26	Single .	Labourer	Laceration of Hand	.....	M
Stacey, John ...	27	Single .	Garden-labourer .	Laceration of Hand	.....	B
Baldwin, John .	6	.....	.....	Lacerated wound of Thumb, left	.....	B
Read, Elizabeth	26	Single .	Servant	Compound fracture of Tibia and Fibula	.....	U
Bozier, Shad. .	14	Single .	Labourer	Fracture of Humerus; compound, comminuted, with laceration	.....	M
Green, William	26	Married	Labourer	.....	Ulceration of cartilage of Femur in the Knee-Joint	
Kittleby, James	32	Single .	Bargeman	Contusion of little Finger	.....	
Lambden, Jos. .	28	Married	Labourer	Laceration of Hand	.....	B
Frith, Henry...	40	Married	Navigator	.....	Inflammation of absorbents; Sloughing of integuments of Finger .	P
Brown, James .	42	Married	Wheelwright ...	Laceration and fracture of Finger	.....	M
Early, George .	15	Single .	Railroad-labourer	Compound, comminuted fracture of Humerus	.....	
Pearson, Steph.	54	Married	Scavenger	Compound fracture of Leg	.....	R

Average duration of Treatment of each Case ... ...

F AMPUTATION.—No. 1.

se of Injury, &c.	Date of Operation.	Stage.			Locality.	Incision		Result.		Duration of Treatment after Operation.
		Primary.	Secondary.	Disease.		Circular.	Flap.	Cured.	Died.	
n over by waggon	Aug. 28, 1839	2 hours	.....	...	Above Elbow...	1	...	1	...	34 days
n over by railroad-ruck	Jan. 7, 1842...	3½ hours	.....	...	Above Elbow...	1	...	1	...	63 days
n over by waggon	Oct. 11, 1840 .	.....	9 days .	...	Above Knee ...	1	...	1	...	76 days
n over by train...	Oct. 6, 1841...	12 hours	.....	...	Below Knee ...	...	1	1	...	87 days
n over by waggon	Aug. 24, 1839	6 hours	.....	...	Above Knee ...	1	...	...	1	2 days
plosion of gun ...	Dec. 24, 1841 .	5 hours	.....	...	Fore-arm ...	1	...	1	...	60 days
ain	Sept. 5, 1843 .	.....	.....	1	Above Knee ...	1	...	1	...	51 days
.....	Oct. 26, 1843 .	.....	.....	1	Shoulder-joint	...	1	1	...	130 days
.....	May 5, 1843...	.....	.....	1	Above Knee ...	...	1	1	...	65 days
.....	Aug. 15, 1843	.....	.....	1	Above Knee ...	...	1	1	...	36 days
n-shot wound ...	Nov. 18, 1843	4½ hours	.....	...	Shoulder-joint	...	1	1	...	93 days
from ladder ...	July 1, 1843...	.....	9 days .	...	Above Knee ...	1	...	...	1	11 days
.....	Aug. 30, 1843	7 hours	.....	...	Above Knee ...	...	1	...	1	31 days
.....	Jan. 23, 1843 .	.....	.....	1	Great Toe ...	...	1	1	...	43 days
n over by waggon	Sept. 5, 1839 .	4½ hours	.....	...	Above Knee ...	1	...	...	1	38 days
ll fell on him ...	Oct. 12, 1842 .	2 hours	.....	...	Below Knee ...	1	...	1	...	22 days
.....	Nov. 28, 1842	.....	.....	1	Above Knee ...	1	...	1	...	35 days
plosion of gun ...	Feb. 6, 1844...	2 hours	.....	...	Fore-arm ...	1	...	1	...	40 days
.....	Jan. 15, 1843 .	.....	.....	1	Above Elbow...	...	1	1	...	44 days
.....	Jan. 18, 1841 .	5 hours	.....	...	Fore-arm ...	1	...	1	...	43 days
.....	Jan. 15, 1842 .	Within 24 hours	.....	...	Upper third of Fore-arm	...	1	1	...	43 days
sting of gun ...	March 12, 1844	2 hours	.....	...	Thumb	1	...	1	...	95 days
.....	June 25, 1839	Within 24 hours	.....	...	Thigh	1	...	1	...	146 days
hinery	July 9, 1840 ...	Within 24 hours	.....	...	Ring and middle Fingers	1	...	1	...	35 days
sting of gun ...	Jan. 6, 1841 ...	Within 24 hours	.....	...	Finger	1	...	1	...	34 days
sting of powder-ask	Jan. 22, 1842 .	.....	12 days	...	Thumb	1	...	1	...	32 days
etting of a coach	June 27, 1841	16 hours	.....	...	Below Knee ...	1	...	1	...	119 days
hinery	Aug. 7, 1841...	Within 24 hours	.....	...	Near Shoulder-joint	1	...	1	...	92 days
.....	May 5, 1841 ...	.....	.....	1	Above Knee ...	1	...	1	...	174 days
.....	Feb. 27, 1843 .	Within 24 hours	.....	...	Finger	1	...	1	...	42 days
sting of gun ...	Oct. 15, 1843 .	Within 24 hours	.....	...	Finger	1	...	1	...	36 days
k of finger whilst andling weeds	Jan. 7, 1843 ...	.....	.....	1	Finger	1	...	1	...	38 days
hinery	Oct. 13, 1843 .	1 hour	.....	...	Fingers	1	...	1	...	47 days
.....	May 27, 1839 .	2 hours	.....	...	Shoulder-joint	Mixed		1	...	9 weeks
n over by waggon	Feb. 16, 1841 .	.....	.....	...	Above Knee ...	1	...	...	1	12 days
... ...										56 days.

Table XX.—RESULTS OF A

		No. of Accidents	No. of Diseases.	Total.	Result. Cured.	Result. Died.	Proportion of Deaths.
UPPER EXTREMITIES.	**Fingers.**						
	Circular { Accidents	7	...	...	7	...	.....
	Circular { Diseases	...	1	...	1	...	.....
	Total Circular ...	...	...	8	8	...	.....
	Flap ... { Accidents	...	...	...	...	...	.....
	Flap ... { Diseases	...	...	...	...	...	.....
	Total Flap	...	...	...	...	...	.....
	Total of Fingers ...	7	1	8	8	...	All cured.
	Fore-Arm.						
	Circular { Accidents	3	...	...	3	...	.....
	Circular { Diseases	...	...	...	...	...	.....
	Total Circular ...	3	...	3	3	...	.....
	Flap ... { Accidents	1	...	...	1	...	.....
	Flap ... { Diseases	...	...	...	...	...	.....
	Total Flap	1	...	1	1	...	.....
	Total of Fore-Arm ...	4	...	4	4	...	All cured.[1]
	Upper-Arm in Continuity.						
	Circular { Accidents	3	...	...	3	...	.....
	Circular { Diseases	...	...	...	...	...	.....
	Total Circular ...	3	...	3	3	...	.....
	Flap ... { Accidents	...	...	...	...	...	.....
	Flap ... { Diseases	...	1	...	1	...	.....
	Total Flap	...	1	1	1	...	.....
	Total of Upper-Arm ...	3	1	4	4	...	All cured.[2]
	Carried forward...	14	2	16	16	...	.....

UPPER EXTREMITIES.

LOWER EXTREMITIES.

Note.—The Glasgow results here referred to were collected by

[1] Glasgow, all cured. Paris, 1 in $3\frac{3}{4}$. [2] Glasgow, 1 in $2\frac{1}{2}$. Paris, 1 in $2\frac{1}{4}$.
[5] 2 primary, six hours; 1 secondary, nine days. [6] Both primary: 1, seven ho

Total number of Accidents	26
Ditto Diseases	9
Ditto Primary Operations (Accidents)	23
Ditto Secondary Operations (Accidents)	3

Total number of Deaths from Accidents	5
Ditto from Primary Operations (Accidents)	4
Ditto from Secondary Operations (Accidents) ...	1

PUTATIONS.—No. 2.

	No. of Accidents	No. of Diseases.	Total.	Result. Cured.	Result. Died	Proportion of Deaths.
Brought forward ...	14	2	16	16	...	.....
SHOULDER-JOINT.						
Circular { Accidents	...	...	...	...	...	.....
Circular { Diseases	...	...	...	...	...	.....
Total Circular ...	...	...	...	...	...	.....
Flap ... { Accidents	1	...	...	1	...	.....
Flap ... { Diseases	...	1	...	1	...	.....
Total Flap	1	1	2	2	...	.....
Mixed Incision ...	1	...	...	1	...	.....
Total of Shoulder-Joint	2	1	3	3	...	All cured.[3]
BELOW KNEE.						
Circular { Accidents	2	...	...	2	...	.....
Circular { Diseases	...	...	...	...	...	.....
Total Circular ...	2	...	2	2	...	.....
Flap ... { Accidents	1	...	...	1	...	.....
Flap ... { Diseases	...	1	...	1	...	.....
Total Flap	1	1	2	2	...	.....
Total below Knee ...	3	1	4	4	...	All cured.[4]
ABOVE KNEE.						
Circular { Accidents	5	...	...	2	3	3 in 5.[5]
Circular { Diseases	...	2	...	2	...	Both cured.
Total Circular ...	5	2	7	4	3	1 in 2⅓rd.
Flap ... { Accidents	2	...	...	...	2	Both died.[6]
Flap ... { Diseases	...	3	...	3	...	All cured.
Total Flap	2	3	5	3	2	1 in 2½.
Total above Knee ...	7	5	12	7	5	1 in 2½ nearly.[7]
Grand Total ...	26	9	35	30	5	1 in 7.

Laurie. The Paris results by M. Malgaigne.

[3] Glasgow, 1 in 1½. Paris, 2 in 3. [4] Glasgow: Deaths, 1 in 2.

1, one hour and a half. [7] Glasgow, 1 in 2¾; Paris, 1 in 1¾.

l number of Cures from Accidents		21
o from Diseases		9
o from Primary Operations (Accidents)		19
o from Secondary Operations (Accidents)		2
ortionate number of Deaths from Accidents		1 in 5¼
o from Primary Operations ...		1 in 5¾
o from Secondary Operations ...		1 in 3

Table XXI.—STRANG

Name.	Age.	State.	Occupation.	Residence.	Date of Admission.	Anterior
Prior, Mary ...	49	Married...	Housewife ...	Wokingham ...	Nov. 18, 1842	13 hours .
Harris, Elizabeth	62	Married...	Housewife ...	Shinfield	May 13, 1843 .	5 days ...
May, William*...	30	Married...	Farm-labourer	Hazeley Heath	Oct. 31, 1841 .	48 hours .
Vincent, Thos.† .	56	Married...	Labourer	Red Lands ...	Nov. 11, 1841	Inflamed 5 gulated 2
Wadham, Ann‡ .	52	Married...	Housewife ...	Aldermaston ...	June 17, 1841	50 hours .
File, Mary	72	Married...	Housewife ...	Maidenhead ...	Sept. 16, 1842	24 hours .
Brattle, Sarah§ .	52	Married...	Housewife ...	Tilehurst	Aug. 11, 1840	.....

* Reduced by Taxis. † Artificial anus from ulceration ten days after operation;

Males ... 2: both Scrotal; one reduced without operation, not having been submitted to previou

Operations ... 6: four recovered; two died; the latter were admitted almost in ar

Table XXII.—DIVISI

Name.	Age.	Occupation.	Anterior Duration.	Description.
Giles, John[1]	25	Carpenter ...	7 years	Contraction of Flexor longus of 2nd left foot
Gould, Ann[2]	5	.....	4 years	Talipes Equinus; Incipient Varus; rigl
Childs, Eliza[3]	2½	.....	1 year	Genu Valgum, or In-Knee; left . ...
Bond, Mary[4]	26	Sempstress...	.....	Genu Valgum, or In-Knee; left . ...
Simonds, Rachel[5]	28	Servant ...	18 months...	Anchylosis; false angular; compound; knee
Wise, Daniel[6]	51	Whitesmith .	4 years	Anchylosis of left knee; false angular .
Candy, Martha[7]	29	Sempstress...	1 year	Anchylosis; false angular; both knees
Welch, Henry[8]	16	Grocer	6 months ...	Genu Valgum . ...
Nalder, Johanna	4	.....	3½ years ...	Talipes Varus; acquired; right . ...
Grant, Eliza[9]	9	.....	7 years	Talipes Equinus; acquired; right ...
Foley, Frederick John[10]	7	.....	From birth...	Talipes Varus; congenital; left ... ...

[1] Pressure on the cushion of the toe before operation disabled him. The relief by operation was complete.

[2] Remains well at the present time.

[3] This case continued well at the last observation.

[4] Had an attack of rheumatism, and was unable to bear the needful apparatus.

[5] Came to the Hospital expecting amputation. Patella dislocated outwards, and fixed by true anchylosis; leg in extreme flexion; anchylosis of tibia and femur, false. Has recovered an useful limb.

Cured ... ... 10. Failed ... ...

Average duration of Treatment of each Case ... ...

*** These cases strikingly confirm the value of subcutaneous tenotomy, which, in its vario

ULATED HERNIA.

Duration.	Kind of Hernia.	Operation.	Reduction.	Date of Operation.	Result. Cured.	Result. Died.	Duration of Treatment.
.. ..	Femoral	1	...	One hour after admission	1	...	26 days
.. ..	Femoral	1	...	Immediately after trying warm bath and taxis	1	...	49 days
.. ..	Scrotal, left side .	...	1	.....	1	...	10 days
ays, Stran- ays	Scrotal.	1	...	November 12, 1841 ...	1	...	69 days
.. ..	Femoral	1	...	Immediate	...	1	14 hours
.. ..	Femoral, right ...	1	...	Immediate	1	...	59 days
.....	Femoral	1	...	Immediate	...	1	16 days

ow healed. ‡ *Post mortem* refused. § *Post mortem* refused.

treatment. Females ... 5: all Femoral. Total number of Cases ... 7.
culo. || Average duration of Treatment of each Case ... 31 days.

ON OF TENDONS.

	Tendons Divided.	Date of Operation.	Result. Cured.	Result. Failed.	Duration of Treatment.
be;	Flexor longus	January 14, 1841...	1	...	19 days
...	Tendo-Achillis	June 3, 1845	1	...	80 days
...	Biceps	February 5, 1841 ...	1	...	34 days
...	Biceps	April 16, 1841 ...	...	1	69 days
eft	Biceps; Semi-tendinosus and Semi-membranosus	May 26, 1843	1	...	112 days
...	Semi-tendinosus and Semi-membranosus ...	July 11, 1843	1	...	111 days
...	Biceps; Semi-tendinosus and Semi-membranosus of each leg	April 16, 1841 ...	1	...	50 days
...	Biceps	November 18, 1840	1	...	26 days
...	Tendo-Achillis	December 19, 1839	1	...	76 days
...	Tendo-Achillis; Abductor pollicis and Extensor proprius pollicis	January 27, and March 12, 1840	1	...	61 days
...	Tendo-Achillis	April 18, 1840 ...	1	...	81 days

- Patella united to femur by bone, but not displaced; flexion extreme; anchylosis of tibia and ur, false. Has recovered an useful limb.
- Both limbs were in extreme flexion; anchylosis false in each; cure of each complete. Is now ıll activity as a servant.
- Continues well.
- Relapsed from neglect of domestic treatment.
- Relapsed from neglect of domestic treatment.

... 1. Total number of Cases ... ... 11.
... ... 65 days.

ıdaptations, constitutes one of the most brilliant achievements of modern surgery.

Table XXIII.—DEATH

Name.	Age.	State.	Residence.	Occupation.	Date of Ad
Hartley, William ...	28	Single	Reading...	Railroad-labourer .	July 2, 1839
Maskell, Elizabeth ...	16	.....	Reading...	Servant	February 12
Pither, Phœbe... ...	21	.....	Hurst	Ditto	January 15,
Palmer, Maria	9	.....	Tilehurst	.....	October 30,
Barnett, Mary Ann ...	5	.....	Reading...	.....	April 13, 18
May, William	2½	.....	Early Common ...	.....	May 9, 1842
Kent, Sarah Ann ...	12	.....	Reading...	Servant	July 24, 184
Wheeler, George ...	4	.....	Shinfield	.....	February 26,
Total number of Cases 8					

DEATHS FROM LACERATIO

Name.	Age.	State.	Residence.	Occupation.	Date of Admission.
Lunner, Jesse	25	Married ...	Reading	Navigator	September 21, 1839
Herbert, John	70	.....	Whitchurch ...	Labourer	April 19, 1842 ...
Parsons, Sarah... ...	15	.....	Reading	Factory-girl ...	August 3, 1842 ...
Gough, James	36	Married ...	Reading	Carter	August 20, 1843 ...
Phillips, William ...	16	.....	Reading	Gas-boy	November 13, 1841
Total number of Cases 5					

FROM BURNS.

mission.	Anterior Duration.	Nature.	Died.	Duration of Treatment.
... ...	Immediate ...	Burnt by gunpowder ...	July 8, 1839	6 days.
1841 ...	Immediate ...	Clothing ignited	February 18, 1841 ...	6 days.
1842 ...	Immediate ...	Ditto	January 20, 1842 ...	5 days.
841 ...	9 days	Ditto	August 4, 1842 ...	9 months.
42	Immediate ...	Ditto	May 6, 1842	25 days.
... ...	Immediate ...	Ditto	May 9, 1842	.....
2	Immediate ...	Ditto	July 31, 1842	7 days.
1842 ...	Immediate ...	Ditto	February 27, 1842 ...	1 day.

Average Duration of Treatment of each Case ... ... 40 days.

NS AND CONTUSIONS.

Anterior Duration.	Nature.	Died.	Duration of Treatment.
Immediate ...	Laceration of Sphincter and Perineum; Contusion of Back, Glutei, &c. ...	October 4, 1839 ...	13 days.
4 hours	Laceration of Head by chaff-cutter ...	May 18, 1842 ...	29 days.
Immediate ...	Laceration of Jaw; Injury of Neck ...	Same day	.....
Immediate ...	Laceration of Leg	August 21, 1843 ...	1 day.
6 weeks	Contusion of Ankle-joint	March 12, 1842 ...	119 days.

Average duration of Treatment of each Case ... ... 32 days.

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Walker, Edward Dering, M.D., Extra-Licentiate of the Royal College of Physicians, London, Teignmouth, Devon.
Walker, Hugh Eccles, M.D., Chesterfield, Derbyshire.
Walker, John, Esq., Surgeon to the Eye Hospital, Princes Street, Manchester.
Walker, J. K., M.D., Physician to the Infirmary, Huddersfield, Yorkshire.
Wallace, Edward, Esq., Surgeon, Carshalton, Surrey.
Wallis, C. C., Esq., Surgeon, Castle Cary, Somerset.
Wallis, Edward, Esq., Surgeon, Lecturer on Anatomy, Hull, Yorkshire.
Wallis, Frederick, Esq., Surgeon, Bexhill, near Battle, Sussex.
Wallis, George, M.D., Senior Physician to the Infirmary, Bristol.
Wallis, William, Esq., Surgeon, Hartfield, Tunbridge Wells, Kent.
Walsh, James Henry, Esq., Surgeon to the Ophthalmic Institution, Worcester.
Walsh, Philip, M.D., Middleton, County of Cork, Ireland.
Ward, J., Esq., Surgeon, Leeds.
Ward, Joseph, Esq., Surgeon, Epsom, Surrey.
Ward, Thomas, Esq., Surgeon, Southampton.
Ward, Thomas Ogier, M.D., 21, Lower Phillimore Place, Kensington, London.

Ward, W., Esq., Surgeon, F.R.C.S., Huntingdon.
Ward, ——, Esq., Surgeon, Stowmarket, Suffolk.
Wardleworth, Thomas Hatton, Esq., Surgeon, Bury, Lancashire.
Ware, John, Esq., Surgeon, Clifton, Bristol.
Warren, Henry, Esq., Surgeon, Knighton, Radnorshire.
Warwick, William R., Esq., Surgeon, Southend, Essex.
Washbourne, Thomas, Esq., Surgeon, Corsham, Wilts.
Waters, Allen, Esq., Surgeon, Exmouth, Devon.
Watkins, Robert W., Esq., Surgeon, Towcester, Northamptonshire.
Watling, Thomas F., Esq., Surgeon, Leominster, Herefordshire.
Watmough, I., M.D., Pocklington, Yorkshire.
Watson, George Churchill, M.D., (Edin.,) Liverpool.
Watson, James, M.D., Bath.
Watson, James E., Esq., Surgeon, Ellesmere, Salop.
Watson, Kenrick, Esq., Surgeon, Stourport, Worcestershire.
Watson, Thomas Sandon, MD., Physician to the Bath Hospital, Bath.
Watts, John, M.D., Paris.
Waylen, W., Esq., Surgeon to the Essex and Colchester Hospital, Colchester.
Webb, Charles, K., Esq., Consulting Surgeon to the Devon and Exeter Lunatic Asylum, Exeter.
Webb, John, Esq., Surgeon, Stratford-upon-Avon, Warwickshire.
Webb, Matthew, Esq., Surgeon, Wellington, Salop.
Webb, T. Fryer, Esq., Surgeon to the Dispensary, Watling Street, Wellington, Salop.
Webber, Alexander, E., Esq., Surgeon, Wellington, Somerset.
Webster, George, M.D., Dulwich, Surrey.
Wedd, Richard, Esq., Senior Surgeon to the West Kent Infirmary, Maidstone, Kent.
Weddell, W. B., Esq., Surgeon, Otley, near Leeds.
Weekes, George, Esq., Surgeon, Hurst-Pierpoint, near Brighton, Sussex.
Weekes, Henry, Esq., Surgeon, Bromptom, Kent.
Welch, Francis, Esq., F.R.C.S., Surgeon to the Taunton and Somerset Hospital, Taunton.
Wells, Edward, M.D., Reading, Berks.
Welsh, W. H., M.D., Eccles, near Manchester.
Welshman, Edward, Esq., Surgeon, Southam, Warwickshire.
West, Charles T., Esq., Surgeon to the Dispensary, Hull, Yorkshire.
West, J. Townsend, Esq., Surgeon, Shepton-Mallett, Somerset.
West, T. W., Esq., Surgeon, Poole, Dorset.
West, William, Esq., Surgeon, Malvern, Worcestershire.
West, William James, Esq., Surgeon, Tunbridge, Kent.
Westall, Edward, Esq., Surgeon, Croydon, Surrey.
Whatman, James, Esq., Surgeon, Maidstone, Kent.
Wheeler, C., M.D., (late of Southampton.)
Whicher, James, Esq., Surgeon, Petersfield, Hants.
Whimper, G., Esq., Surgeon, Tillingham, Essex.
Whitcombe, Edmund Bancks, Esq., Surgeon, Cleobury-Mortimer, Salop.
White, G. M., Esq., Surgeon to the General Hospital, Nottingham.
White, John Grove, M.D., Westbrooke House, Alton, Hants.
White, R., Esq., Surgeon, Portsmouth, Hants.
Whitehead, James, Esq., Surgeon to the Manchester and Salford Lying-in Hospital, Manchester.

Whitby, George, Esq., Surgeon, Swaffham, Norfolk.
Whitfield, E., Esq., Surgeon, Tolleshunt-D'Arcy, Essex.
Whitfield. Henry, Esq., Surgeon, Ashford, Kent.
Whiting, J. B.. Esq., Surgeon to the Lynn and West Norfolk Hospital, Lynn-Regis, Norfolk.
Whittaker, J. M.D., Ballina, Mayo, Ireland.
Whitton, Corbett, M.D., Banbury, Oxfordshire.
Whytehead, H. Y., M.D., Easingwold, Yorkshire.
Wickenden, Joseph, Esq., Surgeon, Birmingham.
Wickham, John C., Esq., Surgeon, Didmarton, Gloucestershire.
Wickham, J. M., Esq., Surgeon, Sutton-Scotney, Hants.
Wickham, W. J., Esq., Surgeon to the Hospital, Winchester.
Wickham, W. N., Esq., Surgeon, Winchester.
Wight, Alexander, Esq., Surgeon, Old Kent Road, Southwark, London.
Wightman, Charles, M.D., Newcastle-on-Tyne.
Wightman, J., Esq., Surgeon, Cawood, Selby, Yorkshire.
Wilcocks, J. J., Esq., Surgeon, Hovingham, Whitwell, Yorkshire.
Wild, James, Esq., Surgeon, Sheffield, Yorkshire.
Wilding, Richard, Esq., Surgeon, Church Stretton, Salop.
Wilding, R., Esq., Surgeon, Blackburn, Lancashire.
Wiles, S. B., Esq., Surgeon, Norwich.
Wilkin, Henry, Esq., Surgeon, Walton, Suffolk.
Wilkinson, H., Esq., Surgeon, Rotherham, Yorkshire.
Wilkinson, Joseph Sheldon, Esq., Surgeon, Great Marlow, Bucks.
Wilkinson, William Cradock, Esq., Surgeon to the Dispensary, Spalding, Lincolnshire.
Wilks, Charles, Esq., Surgeon, Charing, Kent.
Williams, Abraham Jones, Esq., Surgeon, Pwllheli, Carnarvonshire.
Williams, Caleb, Esq., Surgeon to the Retreat, and Lecturer on Materia Medica in the Medical School, York.
Williams, Charles J. B., M.D., F.R.S., Fellow of the Royal College of Physicians, 7, Holles Street, Cavendish Square, London.
Williams, Edward, Esq., Surgeon, Wrexham, Denbighshire.
Williams, Henry, Esq., Surgeon, Llansaintfraid, near Conway, Carnarvonshire.
Williams, Hugh, Esq., Surgeon, Thrapston, Northamptonshire.
Williams, Hugh Jones, M.D., Pwllheli, Carnarvonshire.
Williams, James, Esq., Surgeon, Leintwardine, Herefordshire.
Williams, John, Esq., Surgeon, Abergele, Denbighshire.
Williams, John, M.D., Beverley, Yorkshire.
Williams, John, Esq., Surgeon, Bewdley, Worcestershire.
Williams, John, Esq., Surgeon, Dursley, Gloucestershire.
Williams, John Calthrop, M.D., (Edin.,) Fellow of the Royal College of Physicians of Edinburgh, Physician to the General Hospital, near Nottingham, and Visiting Physician to the General Lunatic Asylum, Nottingham.
Williams, J. Lloyd, Esq., Surgeon, Carnarvon.
Williams, Owen W., M.D., Southampton.
Williams, Peter, Esq., Senior and Consulting Surgeon to the Flintshire General Dispensary, Holywell.
Williams, Philip Henry, M.D., Worcester.
Williams, Richard Lloyd, Esq., F.R.C.S., Consulting Surgeon to the Denbighshire Infirmary, Denbigh.

Williams, William, Esq., Surgeon, Guilsborough, near Northampton.
Williams, William, M.D., Mold, Flintshire.
Williams, William, Esq., Surgeon, South Brent, Somerset.
Williams, William Rumsey, Esq., Surgeon, Carnarvonshire.
Willis, E. B., Esq., Surgeon, Soham, Cambridgeshire.
Wills, George Frederick, Esq., Surgeon, Crewkerne, Somerset.
Wilson, Daniel, Esq., Surgeon, Hull, Yorkshire.
Wilson, Edward, M.D., Physician to the North Staffordshire Infirmary, Newcastle-under-Lyne, Staffordshire.
Wilson, F. H., Esq., Surgeon, Rye, Sussex.
Wilson, George, Esq., Surgeon, Monmouth.
Wilson, Henry, Esq., Surgeon, Runcorn, Cheshire.
Wilson, John Grant, Esq., Surgeon to the General Hospital, Bristol.
Wilson, J., Esq., Surgeon, (late of Sheffield.)
Wilson, Thomas, Esq., Surgeon, Hull, Yorkshire.
Wilson, Thomas, Esq., Surgeon, Nottingham.
Wilson, William Murray, Esq., Surgeon, Horsforth, near Leeds.
Wilson, W. J., Esq., Surgeon to the Royal Infirmary, Manchester.
Wilton, J. W., Esq., Surgeon to the Infirmary, Gloucester.
Windsor, John, Esq., F.L.S., Surgeon to the Eye Hospital, Manchester.
Wing, H., Esq., Surgeon, Bury-St. Edmunds, Suffolk.
Wingfield, Charles, Esq., Surgeon to the Infirmary, Oxford.
Winter, T. B., Esq., Surgeon, Brighton, Sussex.
Winzar, John, Esq., Surgeon, Salisbury.
Wiseman, W. W., Esq., Surgeon, Ossett, near Wakefield, Yorkshire.
Witt, George, M.D., F.R.S., Physician to the Infirmary, Bedford.
Wolfenden, James Mills, M.D., 30, Hunter Street, Brunswick Square, London.
Wolstenholme, George, Esq., Surgeon, Bolton, Lancashire.
Wood, Abraham, Esq., F.R.C.S., Rochdale, Lancashire.
Wood, Charles Walker, Esq., Surgeon, Woodhouse Eaves, near Mountsorrel, Leicestershire.
Wood, Hugh, Esq., Surgeon, Sheffield, Yorkskshire.
Wood, Miles Astman, Esq., Surgeon to the Dispensary, Ledbury, Herefordshire.
Wood, Peter, M.D., Physician to the Royal Infirmary, Dispensary, Fever Wards, and Lunatic Asylum, Manchester.
Wood, Robert, Esq., Surgeon, Ashton-under-Lyne, Lancashire.
Wood, R. H., Esq., Surgeon, Prus, Salop.
Wood, William, M.D., (Edin.,) M.R.C.S., Newport, Salop.
Woodforde, Francis Henry, M.D., (Edin.,) M.R.C.S., Taunton, Somerset.
Woodhouse, Richard, M.D., Reading, Berks.
Woodman, James, M.D., Chichester.
Woods, Charles John, Esq., Surgeon, Godmanchester, Huntingdon.
Woods, Francis, Esq., Surgeon, Northampton.
Woodward, William, Esq., Surgeon, Honiton, Devon.
Woodyatt, John, Esq., Surgeon, Wisteston Court, Hereford.
Wooldridge, Henry, Esq., Surgeon, Botley, Hants.
Woollam, George, M.D., Mexborough, near Rotherham, Yorkshire.
Workman, Maurice, Esq., Surgeon, Reading, Berks.
Workman, Thomas, Esq., Surgeon, Basingstoke, Hants.

Workman, Thomas Keate, Esq., Surgeon, Reading, Berks.
Worthington, W., Esq., Surgeon to the Dispensary, Lowestoft, Suffolk.
Wraith, Hope Samuel Esq., Surgeon, Over Darwin, Lancashire.
Wreford, Samuel, Esq., Surgeon, Ottery-St. Mary, Devon.
Wright, Augustus John, Esq., Surgeon, Caxton, near St. Neot's, Huntingdonshire.
Wright, Edward W., M.D., Shipston-on-Stour, Worcestershire.
Wright, Francis, M.D., Market-Harborough, Leicestershire.
Wright, Henry, Esq., Surgeon, March, Cambridgeshire.
Wyman, George, Esq., Surgeon, Alcester, Warwickshire.
Wyman, W. S., Esq., Surgeon, Kettering, Northamptonshire.
Wynn, Rice, Esq., Surgeon, Shrewsbury.

Y.

Yate, Frederick, Esq., Surgeon, Godalming, Surrey.
Yonge, James, M.D., Fellow of the Royal College of Physicians, Plymouth, Devon.
Yonge, John Francis Dale, M.D., Coblentz, Germany.
Young, Edward William, Esq., Surgeon, Henley-upon-Thames, Oxfordshire.
Young, F. A., Esq., Surgeon, Hawkehurst, Kent.
Young, James, Esq., Surgeon, Wells, Norfolk.

NAMES OF MEMBERS RECEIVED TOO LATE TO BE INSERTED IN THEIR PROPER PLACES, OMISSIONS, AND CORRECTIONS.

COUNCIL.

BATH—William Isaac Morgan, M.D., Fellow of the Royal College of Physicians, Dublin, Turley House, near Bradford.
BRADFORD—W. I. Morgan, M.D.—on the Bath Council.
BRIDGWATER—Jonathan Toogood, M.D.—removed to Torquay.
CHESTER—Thomas Bagnall, M.D., Carden Bank.
WHITCHURCH—Thomas Bagnall, M.D.—removed to Chester.

MEMBERS.

Adams, Dennis, Esq., Surgeon, Cambridge.
Adcock, John Fleming, Esq.—*vice* Adcock, J. V.
Arthur, S. P., Esq., Surgeon, St. Day, near Truro, Cornwall.
Bartrum, John Stothert, Esq.—add, Surgeon to the Walcot Dispensary, Bath.
Bellott, William Henry, Esq.—add, Surgeon to the Military Hospital, Honorary Surgeon to the Workhouse, Inspecting Surgeon under the Factory Act, &c., Stockport.
Budd, William, M.D.—add, Physician to St. Peter's Hospital, Bristol, and Lecturer on the Practice of Medicine at the Bristol Medical School.
Cockburn, Archibild William, Esq., M.D., Ross, Herefordshire.
Faircloth, John M. C., Esq.—add, Surgeon to the Royal Dispensary, Northampton.
Farr, Charles John, Esq., Surgeon—removed to Saxmundham, Suffolk.
Feild, John James, M.D.—add, Physician to the Torbay Infirmary and Dispensary.
Fereday, Samuel Day, Esq., *vice* Fereday, Samuel.
Fowke, Frederick, Esq., Prior's Marston, near Southam, Warwickshire.
Hilbers, ——, M.D., Norwich.
Jenkins, Charles Frederick, Esq., Surgeon—removed to Bath.
Prosser, Henry Fowke, Esq.—*vice* Prosser, Henry Fowle.

As it is scarcely possible to avoid errors in printing so numerous a list of Members, the Secretary is anxious, wherever they are committed, that they may be amended; and will therefore feel obliged if those Members whose designation and address are not rightly inserted, or whose Christian names are omitted, will send the requisite corrections.

THE FOLLOWING ARE

THE PRINCIPAL OBJECTS

TO WHICH THE ATTENTION OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION

IS DIRECTED.

1st.—Collection of useful information, whether speculative or practical, through Original Essays, or Reports of Provincial Hospitals, Infirmaries, or Dispensaries, or of private practice.

2nd.—Increase of knowledge of the Medical Topography of England, through statistical, meteorological, geological, and botanical inquiries.

3rd.—Investigations of the modifications of Endemic and Epidemic Diseases, in different situations, and at various periods, so as to trace, so far as the present imperfect state of the art will permit, their connections with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.

4th.—Advancement of Medico-Legal Science, through succinct reports of whatever cases may occur in Provincial Courts of Judicature.

5th.—Maintenance of the honour and respectability of the Profession, generally, in the Provinces, by promoting friendly intercourse and free communication of its Members, and by establishing among them the harmony and good feeling which ought ever to characterise a liberal profession.

THE LAWS

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

1st.—That a Provincial Medical and Surgical Association be formed.

2nd.—That the Association be managed by a President, a President of the Council, Secretary or Secretaries, and Council.

3rd.—That the several Officers be appointed annually, by a General Meeting of Members convened for that purpose, at whichever of the principal towns may be appointed; the place of such Meeting being prospectively notified each year.

4th.—That at this Meeting shall be presented a Report, prepared by the Secretary or Secretaries, of the general state of the Association, its proceedings, and pecuniary accounts; the Report to be afterwards printed, and a copy supplied to every Member.

5th.—That at this Meeting one of the Members shall be appointed to give, at the next Annual Meeting, an account of the state or progress of Medical Science during the last year; or an Oration on some subject connected with Medical Science; or a Biographical Memoir of some eminent cultivator of Medical Science, who may have resided in the Provinces.

PRESIDENT OF THE ASSOCIATION.

6th.—That the office of President be honorary, and conferred on some senior Physician or Surgeon of eminence, resident in any of the provincial towns comprised in the circle of the Association.

OFFICERS AND COUNCIL.

7th.—That the Secretary or Secretaries be resident in Worcester, the place of publication, the duties being to attend to the printing of the *Transactions*, and to correct the press; to be present at the meetings of the Council, and to keep the minutes thereof; to correspond with the Members of the Association; and to receive and submit to the Council all papers transmitted for publication.

8th.—That the Council consist of a President and —— Members, to be selected from the principal provincial towns. The Council, with whom must rest the chief responsibility of publication, to have full power of deciding on all papers transmitted; and the consent of three of its Members must be obtained before any paper can be published. It shall also be the duty of the Council to receive the subscriptions, when due, in their respective districts.

9th.—That the President of the Council be also the Treasurer of the Association, and keep the financial accounts.

REGULATIONS OF THE DISTRICT BRANCHES.

10th.—That Members of the Association be at liberty to form District Branches wherever it may suit their convenience.

11th.—That in order to facilitate the formation of such Branches, and maintain uniformity amongst them, the General Council provide suitable instructions for the guidance of those who may unite in instituting them.

12th.—That conformity with these instructions be further ensured, by the initiating proceedings and organization of each Branch being submitted to the General Council for their revision and approval.

13th.—That the District Branches be free to govern themselves as their respective Members may think fit; but that the by-laws ordaining the special government be submitted to the General Council previously to their taking effect, in order to guard against the possibility of any such by-laws contravening the fundamental laws of the Association.

14th.—That the District Branches be empowered to present for Election such of their Members as it may be deemed advantageous to the general and local interests of the Association to place on the General Council.

15th.—That the expenses incurred by the District Secretaries in conducting the proceedings of the District Branches be defrayed from the general fund, provided such expenses do not, in any instance, exceed one-seventh part of the guinea subscribed by each Member enrolled in the District Branch.

16.—That if any circumstance arise in the formation of District Branches which calls for a larger expenditure than what is allowed by the foregoing resolution, such expenses, provided they do not exceed one-fourth of the guinea, may be allowed by a statement of the circumstances being made known to the General Council.

ELECTION OF MEMBERS, ANNUAL MEETINGS, &c.

17th.—That each Member, on applying for admission, be nominated by two Members, as a pledge of eligibility.

18th.—That at each Annual Meeting the place of meeting for the ensuing year shall be announced.

19th.—That any Member wishing to propose a new law, or an alteration in an existing law, must send notice of his intention to the Secretary or Secretaries three months previous to the Anniversary Meeting, which will be circulated with the Report of the Council.

20th.—That the Association appoint Honorary Members at the Anniversary Meetings only.

21st.—That the Association appoint Members in foreign countries, to be styled "Honorary Corresponding Members," from whom communications, respecting the state of medicine in those countries, are expected to be received.

BENEVOLENT FUND.

22nd.—That a Medical Benevolent Society, under the restrictions proposed in the Report of the Committee presented to the Anniversary Meeting at Oxford, be connected with the Association.

PAYMENT OT SUBSCRIPTIONS, &c.

23rd.—Each Member of the Association to pay one guinea admission, and the same amount annually afterwards; the subscription to commence from the 1st of January each year, and to be considered as due, unless notice of its being withdrawn be given to the Secretary or Secretaries antecedently to the year for which it would be payable; for such subscription each Member shall receive a copy of each publication of the Association issued for the general use of the Members.

24th.—That those Members who have not an opportunity of paying their subscriptions to a Member of the Council resident in their district, are requested to pay it through the medium of their own bankers, to Messrs. Robarts and Co., London, for Messrs. Berwick and Co., Worcester, to the credit of the Association, or by a Post-office Order, sent to the President of the Council or the Secretary, which mode of remittance is specially pointed out, from being found the most convenient in conducting the business of the Society.

25th.—That all Papers and other communications be addressed to the Secretary or Secretaries, at Worcester, and forwarded carriage free.

26th.—That Messrs. Berwick and Co., Old Bank, Worcester, be the Bankers of the Association.

ROBERT J. N. STREETEN,

SECRETARY.

RULES

OF

THE BENEVOLENT FUND

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

Before specifying the Rules which are to direct the proceedings of this Society, it is proper to repeat, in this place, the main principles on which it is established. It is not intended either to be a Benefit Society, or an Assurance Club; but, strictly speaking, a benevolent or charitable institution, founded and promoted for the express purpose of assisting our professional brethren, when struggling under the pressure of disease or other calamities. It is likewise proposed, under circumstances of peculiar urgency and distress, to administer relief to the widow or family of a professional man, who may have been deprived of the support and protection of a husband or parent. While, therefore, the sole design of this Society is to hold out the hand of charity and benevolence to a suffering and afflicted brother, or his family, it will not countenance improvidence or idleness, or evil habits of any kind.

The principle above stated has received the sanction of three successive meetings of the "Provincial Medical and Surgical Association;" and the following resolutions were finally adopted at the anniversary held at Manchester, on the 20th and 21st of July, 1836:—

1. That a charitable fund be created by donations and subscriptions of members of the Association, to be called "The Benevolent Fund of the Provincial Medical and Surgical Association."

2. That contributions be received from all persons friendly to the objects of the Society, though belonging neither to the Association nor to the profession.

3. That the object of the fund be the relief of medical men* under severe and urgent distress, occasioned by sickness, accident, or any other calamity.

4. That any medical man labouring under such afflictions be considered a fit object for the charity.

5. That the claims of contributors shall, as far as possible, have the preference; but that contributions to the fund give no claim of right to relief, the fund being one of pure charity, and that each case be judged according to the urgency of the distress.

6. That under circumstances of peculiar emergency, relief may be extended to the widows and orphans of medical men, it being understood that it is not the design of this fund to relieve medical men from the necessity of providing for their families by ordinary life insurances, and such other means as prudence dictates.

7. That the management of the fund be conducted by Committees of the contributing members, annually appointed; the Central Committee to be at Cheltenham, and Local Committees, subordinate to the Central, in each of the principal cities and towns—the Central Committee having power to appoint Local Committees wherever they may be required.

All communications to the Central Committee to be addressed to the Treasurer and Secretary, Dr. Conolly, Castleton House, near Cheltenham.

* The Society will not acknowledge any one as a fit object of relief who has not received a regular professional education, and is not either a Doctor of Physic, or a Member of the College of Surgeons, or of the Apothecaries' Company.

NOTICES.

All Papers and other Communications to be addressed to the Secretary, Dr. Streeten, Worcester, and forwarded carriage-free.

Those Members who have not an opportunity of paying their Subscription, which becomes due on the 1st of January in each year, to a Member of the Council resident in their district, are requested to pay it, through the medium of their own Bankers, to Messrs. Robarts and Co., London, for Messrs. Berwick and Co., Worcester, on account of the "Provincial Medical and Surgical Association;" or they may remit the amount through the Post-office to either the President of the Council or the Secretary.

Gentlemen wishing to join the Association, are requested to apply to some Member of the Council in their immediate district; to Dr. Hastings, President of the Council, or to Dr. Streeten, Secretary, Worcester.

NOTICE TO MEMBERS.

Arrangements are in progress by which the *Transactions* will in future be published shortly after the Anniversary Meetings, instead of earlier in the year as formerly. Another volume will accordingly appear in the course of the present year, and will contain the second part of Mr. Crosse's elaborate treatise on "Inversio Uteri," which, owing to unavoidable circumstances, over which we have no control, could not have appeared in the present volume without occasioning very serious delay.

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